the NORTHWESTERN MILLER

THE INTERNATIONAL NEWS MAGAZINE FOR THE GRAIN, MILLING AND BAKING INDUSTRIES

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a miller publication • business journalists since 1873

Volume 264 AUGUST 8, 1960 Number 3

Gold Coin Rye

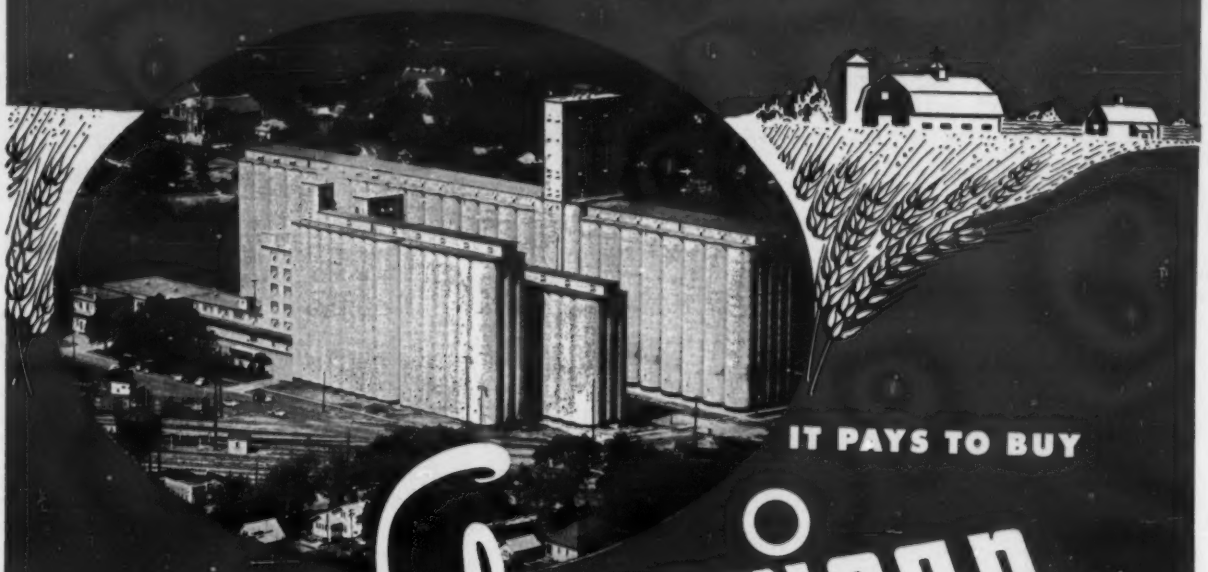
Americans love real rye bread—but they can't find it today in many of their favorite bakeries.

Are you capitalizing on rye bread in your shop? Remember, for real rye bread, there's nothing like International's complete line of Gold Coin Rye Flours.

BAKERY PROVED
FLOUR

International
MILLING COMPANY
GENERAL OFFICES: MINNEAPOLIS 2, MINNESOTA

From the Heart of the Wheat Belt



IT PAYS TO BUY

American Flours

AMERICAN FLOURS have set a mark of excellence in dozens of leading bakeries. And for this basic reason—the flours are milled with a scientific skill that produces a superior product from the finest raw materials. BUY AMERICAN! You'll see the difference.

AMERICAN FLOURS COMPANY
NEWTON, KANSAS

Mill Capacity 6,000 Sacks Daily — Grain Storage 3,000,000 Bushels

HIGHLIGHTS OF FLEISCHMANN'S SERVICES TO BAKERS: THEN AND NOW **One of a Series**

The station at Stamford, Connecticut, saw an influx of new commuters in 1954. That was the year Fleischmann researchers packed test tubes and equipment to move from the Grand Concourse in New York City to Fleischmann's present research center in Connecticut. With them they brought the spirit which has always motivated Fleischmann research. It is based on the belief that basic research in the improvement and use of bakery ingredients is among the most valuable services we can give a baker.

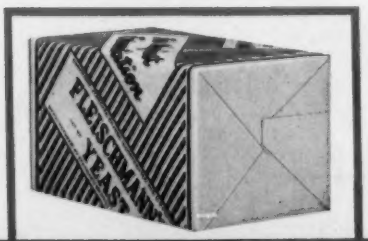
Today, Fleischmann continues to research ways to improve and refine bakery ingredients. For we recognize that our success depends on our ability to help America's bakers produce better baked foods profitably.

That's why Stamford can expect to have Fleischmann researchers as neighbors for a long time to come.

"Next stop, Stamford"

1954 . . . with them they brought the spirit of Fleischmann research

Fleischmann's Yeast



MEASURE YOUR YEAST BY THE SERVICE YOU GET

the NORTHWESTERN MILLER

Published Every Other Week for the Grain, Flour and Baking Industries

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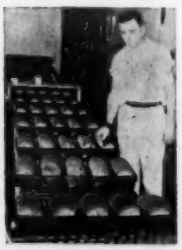
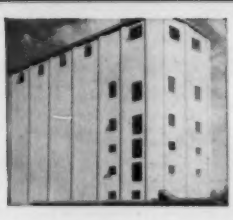


COVER PICTURE—

Bread, tempting and tasty, comes off the line where it was baked with the new Bellera "Air Spun" flour of General Mills, Inc.

Every baker wants uniform flour...

ATKINSON DELIVERS IT!

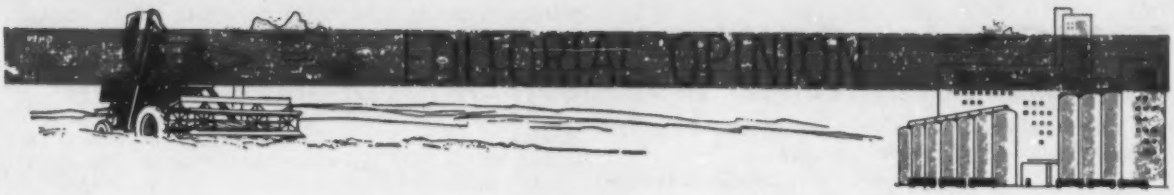


THOSE BIG STORAGE BINS Atkinson built in 1941 have paid off in many ways. In proper aging. In improved techniques found in milling for storage, rather than under pressure of delivery. In product control, where flour is set aside in bins for testing before loading in bulk or bags. All our customers have benefited. You can too.

*Reg. U. S. Pat. Off.

Don't take less than you can get from ATKINSON MILLING CO.
MINNEAPOLIS

IT'S BIN CHECKED* IT'S BIN AGED*



We Disagree with Mr. Kennedy and Mr. Bell

BOARD CHAIRMAN Gerald S. Kennedy and President Charles H. Bell, in their annual report to the owners of General Mills, Inc., say that the reduced earnings in the past fiscal year "reflect only a pause in the company's progress."

We have to disagree with Mr. Kennedy and Mr. Bell —semantically speaking. We cannot disagree with the figures, reported elsewhere in this issue, but after a careful perusal of the annual report we find no evidence of "pause" in the progress of GMI. This does not mean we are dismissing reduced income lightly. It is serious and is reflected throughout the flour producing industry.

The designers of the report—the layout men and the typographers—also have quietly contradicted their board chairman and their president. The report itself—obviously a hot contender for national honors when awards for the best corporation statements of 1960 are handed out—uses an attractive type face—American Garamond. But in disobedience of all the typographical rules ever written, the designers have used a different type face—Lydian—for one word they use over and over again in the report.

That word is the very antithesis of pause. The word is RESEARCH. It hits with the impact of a bullet from nearly every page in the report and is the epitome of the progress reported to the people who own GMI.

RESEARCH has provided the new Bellera process. A piece of James F. Bell philosophy, "You must follow where research leads," has been the guide line at GMI for years. And, indubitably, in other companies, too. Because the flour milling industry is, of itself, progressive.

RESEARCH, in the past eight years, has provided GMI with some 27 issued U.S. patents relating to the flour milling field. The company, with justification, is not revealing just how many of these patents went into Bellera. But the new process owes its being to RESEARCH.

Other millers will benefit, in due course of time, from GMI's work. Buhler Bros., the Swiss milling engineer, so closely associated with the development, has already been licensed to sell milling units in countries outside North America. And GMI officials say units may be available to others in North America at a later date.

That would be entirely in keeping with the traditions established by the company which gave Brown 'N Serve to the nation's bakers. «

Profit and the Responsibilities of Unions

UP GO THE SALES CURVES, but down go the profits. That's what the charts show on the walls of the sales managers' offices up and down the U.S. The millers and bakers are not alone in feeling the draft.

For the milling industry, General Mills, Inc., is an indicator of the trend. Sales in the fiscal year just closed come second only to last year's all time high, but the profit curve dips sharply with the undertow of a $5 million drop-off.

Commercial bakers, too, are reporting bigger, but not better, sales. Continental Baking Co., with an intake of $197.4 million in the first six months of its fiscal year ended June 25, topped the figure for the similar period a year ago by nearly $7 million. But the net profit slipped from nearly $5 million to less than $4 million.

General Baking Co., in the first half of 1960, netted under $600,000 against more than $1.1 million in the same period of 1959.

What's the problem? The bakers say that the cost of selling baked foods has leaped upwards; so have delivery expenses. But they also pinpoint higher labor costs and in that they are at one with the millers.

The intense competition of the past year has been a major factor in reducing flour profit margins significantly. Millers, with a net return of 1.5¢ on the sales dollar in recent years can ill afford these reductions. Neither can the bakers, though they are in better shape than the millers. The Federal Trade Commission reports that the net return to stockholders in 14 large baking corporations was 10.4% in 1958, an improvement over the 1940 proportion of 7.4%. The biscuit and cracker makers do even better than their bread baking brethren—with a net return of 10.7%.

The costs of producing flour and selling it have increased enormously in the past few years and millers will be taking longer and harder looks at their operational expenses.

Yet fundamentally, responsibility for the financial health of the milling industry must be borne by the men who work in it. Labor is taking a bigger share of the sales dollar—the average hourly rate has increased 73% in the past 10 years—and the time has come for the unions to ask themselves if their demands are not out of all proportion to the market price of the goods they make.

Labor is taking at least 15% of the sales dollar; in some cases the proportion is greater. We do not begrudge them their fringe benefits, if they are kept within reasonable bounds. But earlier this year one union listed 40 demands and had they all been met the price of flour would have been hiked 5¢ per 100 lb.

Already, some economists are beginning to face a disagreeable fact—the U.S. is moving into another recession. Its depth and pace have not yet been clearly defined, but it is being retarded only by a reluctantly sustained buying power. (High sales figures are not limited to flour products and baked foods.)

The economists cannot estimate when this reluctant buying power will become fully negative in its effects—that is, when it no longer becomes reluctant but actually

EDITORIAL OPINION

halts. The fiscal barometers clearly point to recession. The actions of some federal agencies confirm it.

Saddest part of this picture is the attitude of the administration in Washington. Timidity is the word to describe it. The government and its chief components, as they don the party colors, won't admit the onset of recession. And though privately they must be aware of it, too little is being done to check it.

There's a blow coming and some sails must be reefed. The labor unions would do well to take note of their responsibilities in this economic situation. And while they are avidly discussing pay boosts, the union leaders should pause and inculcate into the workers the need to aid management in cost cutting defenses.

There are some union business agents who take unto themselves the full credit for securing higher wages and greater fringe benefits for the workers. Nothing could be further from the truth. What these men fail to recognize is that prudent company managements have provided the operatives with their improved rates of compensation. It is the companies that pay, not the unions.

These same business agents point complacently to the profits of the mills and bakeries in terms of dollars. They refuse to consider percentage return on investment—the money provided to make jobs—and the huge sums tied up in machinery and equipment to engineer the jobs.

One such unionist recently evidenced the rising population of the U.S., sparking an even greater demand for flour products, as confirmation of the good health of the industry. Yet the U.S. Department of Agriculture, in its report on the National Food Situation, clearly underlines the still dropping level of per capita consumption.

At the beginning of this year, the report estimated per capita consumption of flour in 1960 at 119 lb. Now, in mid year, that figure is down to 118 lb.

The lesson to the workers is obvious. Union officials who fail to point up the lesson are lacking in their responsibilities to those whom they serve—and that means management as well as labor. «

The Retirement of Elmer W. Reed

PERHAPS NO MILLER OF modern times has served the Millers National Federation and his fellow millers in as many different capacities as Elmer W. Reed, who retired Aug. 1 as president and general manager of the Kansas Milling Co., Wichita.

Transportation, exports, grain, agriculture, emergency problems all came within his ken as a committee man. Many were the assignments coming his way and all were gladly undertaken by a man who is saturated in service. A former vice chairman of the MNF board, he joined the directorate in 1942.

Elmer W. Reed

Frequently, he was a spokesman for the industry at meetings of wheat growers. And he served as a liaison man with other industries where tact and diplomacy had to level with a forthright and down-to-earth approach.

These assignments were a tribute to a thoughtful and articulate miller whose interest and understanding are broad and whose approach to a problem is never selfish or sectional.

It's a career of service extending over 45 years now standing to the credit of the 64-year-old Mr. Reed. And he has brought distinction to many well known firm names in the milling industry. Kansas-born, Oklahoma-indoctrinated, he got his start in milling with the Canadian Mill & Elevator Co. at El Reno. After a stint with the Arkansas City Milling Co. he joined the Shellabarger organization in Salina as general sales manager—that was in 1927—and in 1935 he took over as general manager. Ten years later, he and a group of associates purchased the firm's milling interests and Mr. Reed was elevated to the presidency. Within 18 months, International Milling Co. bought the firm, but Mr. Reed stayed on for three years.

In 1949 came a move to Flour Mills of America as executive vice president and in 1951 he went to Wichita to head up the reorganized Kansas Milling Co. Last year Mr. Reed was instrumental in the sale of the majority stock in the company to the Ross-Zimmerman group, a firm prominent in Kansas milling and elevator circles. But once again he stayed on to see that the transaction went smoothly.

During World War II Mr. Reed served as a flour milling consultant to the Office of Price Administration in Washington.

A pity it will be if Mr. Reed's services are lost to the industry. Perhaps he is motivated by the desire to take things easier—a heart attack about a year ago prompted the delegation of some of the detail work in Kansas Milling Co.—but we have our hopeful doubts.

Mr. Reed says he is going to devote himself to personal affairs and to his farming interests. But we have a feeling that a man of such active temperament will eventually be drawn into some kind of industry service activity where his knowledge and talents can be used effectively. Of this we are sure—if business-wise the industry is the loser, community service in Kansas will be the gainer. «

Francis McKown New President

Francis McKown was elected president and general manager of the Kansas Milling Co., Wichita, at a meeting of directors of the company, succeeding Elmer W. Reed who retired as president of the firm on Aug. 1. Mr. McKown was vice president and general manager of the firm and has been associated with Kansas Milling Co. for many years.

Eldon Addy, also associated with Kansas Milling Co. for many years in sales executive positions, was elected vice president.

Pat H. Theissen, an attorney of Sterling, Kansas, and a director of the company, was elected secretary-treasurer. Mr. Theissen who is a son-in-law of Paul Ross and a director of Ross Industries, Inc., Newton, parent company of Kansas Milling, will move to Wichita and become actively associated with the Kansas Milling operations, within the next few months.

Mr. McKown started with the Kansas Milling Co. in its grain department and rose to become head of that part of the firm's operations. «

INDUSTRY RECORD . . . An Account of Trade Affairs and Events

United States:

One of the grain trade's "old men" has a new assignment . . . **Carl Farrington** takes over the newly-created position of vice president, agricultural group, with Archer-Daniels-Midland. Why "old man"? No reflection on young Farrington's age—he was one of that distinguished group of traders known as the "Nine Old Men" which plagued the life out of the government till it gave back the trade some semblance of freedom. **Ervin A. Olson,** executive vice president of the agricultural group, says **Ralph Bruce,** oilseeds division manager, succeeds Mr. Farrington as manager of company's grain operations except those on Pacific Coast . . . **Henry W. Collins,** also a veep, remains in charge there with HQ in Portland.

Carl Farrington

Farrington Career . . .

began as USDA economist in 1928, became veep of Commodity Credit Corp., joining ADM as grain division manager in 1948 . . . director and a veep by 1949 . . . served as U.S. representative on United Nations committee making plans for international action in event of famine . . . **President Eisenhower** named him to interim farm advisory committee in '53 . . . director and past chairman of National Grain Trade Council . . . prominent with elevator groups.

Ralph Bruce

Mr. Bruce started with ADM in 1937 . . . began in grain division . . . foreman of campany's Soo Line terminal in Minneapolis . . . buyer and merchandiser in '45 . . . flax buyer in '47 . . . assistant vice president in '55 . . . full-fledged veep in '57.

Commander Larabee Veteran . . .

James W. Whitacre, with C-L division of ADM and predecessors 30 years retires . . . joined Larabee Flour Mills in 1925 starting as assistant chemist at Hutchinson, Kansas . . . promoted to chemist . . . served at Wellington, Kansas City and Minneapolis . . . located in KC since '32, the year he was named head chemist in charge of company's central control laboratories . . . in 1947 named wheat buyer and assistant to manager of grain department at KC.

New Cargill President . . .

is **Edwin E. Kelm** . . . succeeding **Cargill MacMillan** who has been granted leave of absence to aid recovery from illness . . . Mr. Kelm started with Cargill in '33 . . . named executive veep in charge of over-all operations in '57 . . . will continue operational role in addition to presidency . . . Mr. MacMillan gradually recovering and will be back, reports board chairman **John H. MacMillan, Jr.** New president — born 1911 — started as grain merchandiser specializing in barley . . . headed Cargill grain division in '46.

Edwin E. Kelm

Ward Baking Co. . . .

has agreed to buy Farmhouse Frozen Foods, Miami, Fla. Included in group are Connecticut Pie Baking Co. and Matthews Bros., Wethersfield, Conn. . . . markets in 24 states and Canada . . . business headed by **Phaton J.** and **Charles J. Matthews** . . . stock privately held . . . will be operated as wholly owned subsidiary of Ward.

Ross Industries . . .

of Newton, Kansas, has a new director . . . **George Lehman,** vice president . . . he's been a sales executive for American Flours Co., division of the firm, for some years . . . recent annual meeting re-elected to directorate—**G. M. Ross, Paul Ross, Carl Ross, Floyd Ross, Frank Ross, Hal Ross, Thomas Ross, P. R. Ross, L. E. Zimmerman, T. G. McDonald** (sterling worker for the grain and flour trades on Far Eastern missions) **Vincent Canzoneri** and **P. H. Thiessen.**

THE PILLSBURY CO. is putting into motion its plans for helping bakers prepare for the annual fall doughnut month promotion. Pictured is Pillsbury's counter card and a deluxe, motion display which bakers may obtain sufficiently far ahead to work in with their sales programs.

Quaker Oats Co. . . .

has named **G. Fred Kerns** as sales development director, says **R. D. Stuart, Jr.,** veep in charge of grocery products sales . . . Mr. Kerns has been manager of west central sales region in Kansas City since 1959 . . . joined firm as retail salesman in '46 and named flour sales manager at Chattanooga in '51 . . . was assistant division sales manager at St. Joseph five years . . . new west central sales region manager at KC is **M. C. Olsson** from Cleveland . . . sales manager there since '57 . . . joined Quaker in '35 . . . was manager at Minneapolis from 1948 to 1957 . . . St. Paulites and Duluthians know him well, too.

G. Fred Kerns

Veteran Grain Men . . .

honored by Kansas City Grain Club on retirement . . . **Edwin C. Hoebel** left Bartlett & Co. after 56 years . . . **James D. Tinklepaugh** retired from Burrus Mills, Inc., after 46 years of grain trading . . . honors paid at picnic at Berryhill farm of **R. Hugh Uhlmann,** Standard Milling Co. It's a second retirement for 75-year-old Mr. Hoebel . . . moved to Florida in '29 intending to retire after long career in commission business in KC with his brother . . . but following year was importuned to come back as wheat buyer for Farmers National Grain Corp., and afterwards, when Hart-Bartlett-Sturtevant Grain Co. was formed he joined that organization, continuing with the successor firm Bartlett & Co. . . . one of the KC exchange's most popular figures, Mr. Hoebel's imposing physique eminently fitted him for the post of chairman of the floor committee . . . he held this for many years, earning the title of "Commissioner."

Mr. Tinklepaugh . . .

started as an office boy for the Ernst-Davis Commission Co. at KC in 1914 . . . branch manager at Salina for Davis-Noland-Merrill Grain Co. and other firms for about 17 years from '24 . . . returned to KC in '44 and joined the grain division of Burrus when Davis-Noland-Merrill withdrew from the grain business . . . still director and treasurer of the latter firm now engaged primarily in ranching and other interests . . . a former president of Salina Board of Trade, he plans to retain his membership of KC Board of Trade.

Dividends Declared . . .

by milling companies . . . Colorado Milling & Elevator Co., Denver, pays a quarterly dividend of 35¢ a share Sept. 15 to shareholders of record Aug. 15 . . . Standard Milling Co., Kansas City, pays a quarterly dividend of 5¢ a share on Class A and Class B common Sept. 1 to stockholders of record Aug. 15 . . . Burrus Mills, Inc., Dallas, declares dividend of $1.50 a share on the common . . . payable in quarterly installments of 37½¢ starting Aug. 31 to stockholders of record Aug. 7.

K-State Facilities . . .

destroyed by fire, now being rebuilt with a super-duper flour mill, will be aided by gift of $50,000 each by two cooperatives—Farmers Union Jobbing Assn. of K.C. and Farmers Cooperative Commission Co. of Hutchinson.

Canada:

Wheat, Flour Exports . . .

to the end of June—one month shy of crop year end—estimated at 253,924,000 bu. running 16,234,000 bu. behind same period last year . . . flour provides equivalent of 33,796,000 bu.

Brazil:

Millers in Sao Paulo . . .

have got together to form a consortium to grow their own wheat . . . imports from Argentina, U.S. and Russia unable to meet the clamor for supplies. «

Obituaries

ALBERT P. STRIETMANN, 86, while vacationing at Lake Placid, New York. He was retired chairman of the board of United Biscuit Co., Chicago, and of Strietmann Biscuit Co., Cincinnati. His home was at Newton, Ohio.

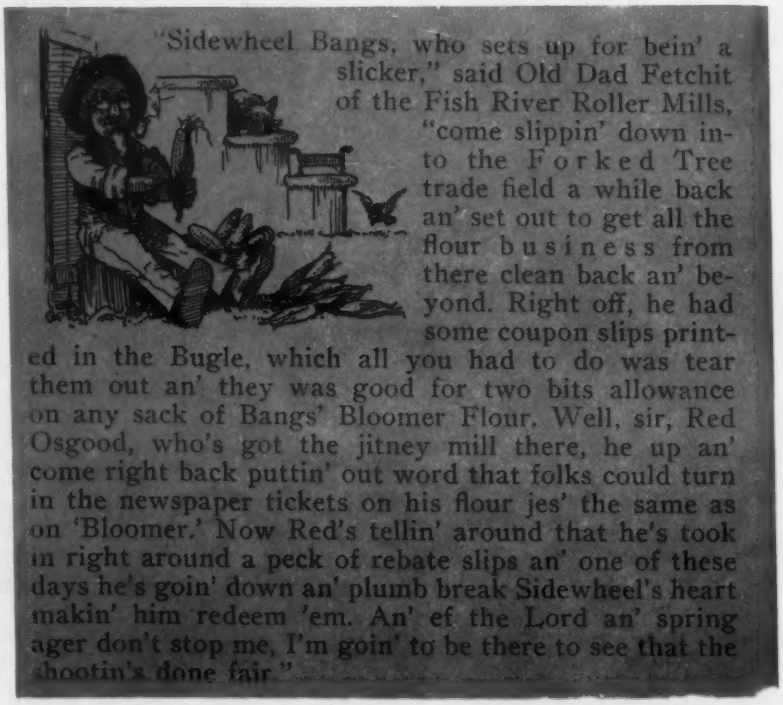
Mr. Strietmann started in the baking business at the age of 18; later with a brother, George, took over the small family shop upon the death of their father. From a handful of employees, the enterprise grew to one of the largest firms in the industry.

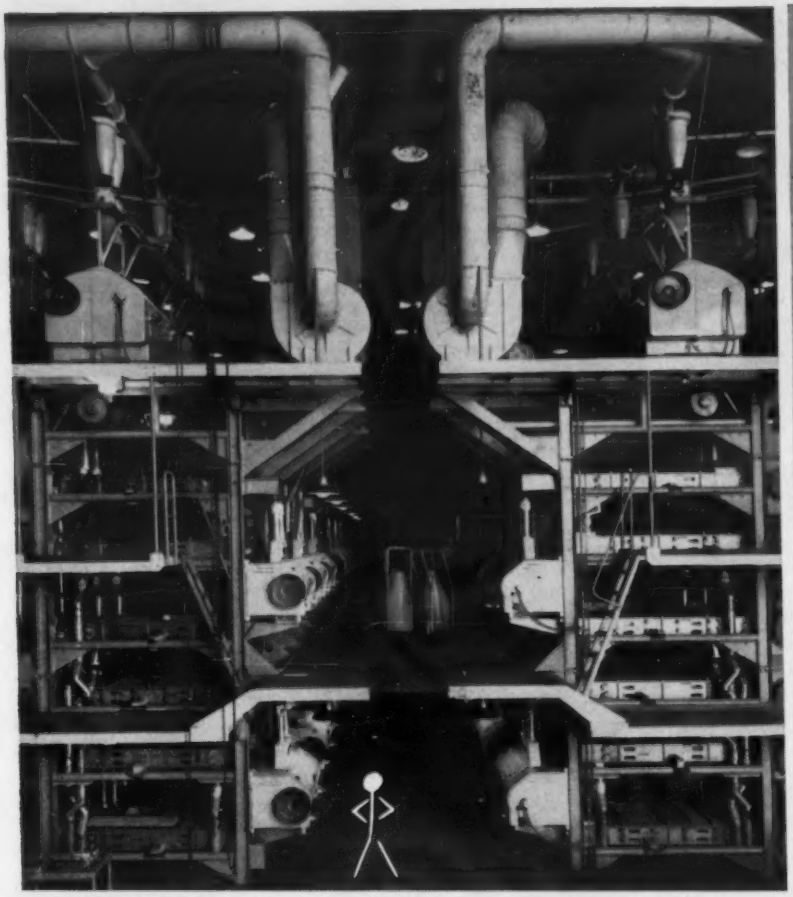
Among his many accomplishments was organization of the Biscuit and Cracker Manufacturers Assn., of which he later became president.

Survivors include his wife, a son, George H., now chairman of the board of United Biscuit, one grandson and four great grandchildren.

JOHN J. LARKIN, at Sioux Falls, S.D., a director of United Biscuit Company of America. He started work for the Manchester Bakery, Luverne, Minn., in 1898 as an errand boy, two years later moved with the company to Sioux Falls.

He remained with the firm as it developed into Manchester Biscuit Co., rose to prominence as the firm developed its specialties in cookies and crackers. In 1930 Mr. Larkin became company president. He was made a director of United Biscuit when it purchased Manchester in 1945.


"Sidewheel Bangs, who sets up for bein' a slicker," said Old Dad Fetchit of the Fish River Roller Mills, "come slippin' down into the Forked Tree trade field a while back an' set out to get all the flour business from there clean back an' beyond. Right off, he had some coupon slips printed in the Bugle, which all you had to do was tear them out an' they was good for two bits allowance on any sack of Bangs' Bloomer Flour. Well, sir, Red Osgood, who's got the jitney mill there, he up an' come right back puttin' out word that folks could turn in the newspaper tickets on his flour jes' the same as on 'Bloomer.' Now Red's tellin' around that he's took in right around a peck of rebate slips an' one of these days he's goin' down an' plumb break Sidewheel's heart makin' him redeem 'em. An' ef the Lord an' spring ager don't stop me, I'm goin' to be there to see that the shootin's done fair."



AN INSIDE LOOK at a Bellera mill. Roller mills are easily identifiable—the machines left and right are compact classifiers. The figure of the man indicates the size of the plant.

Milling engineers perennially complain that the process of making flour is too complicated. Too many machines are needed, they say. And management deplores the high cost of equipment and is aghast at space requirements. When James F. Bell, dean of General Mills, Inc., said many years ago: "Let's simplify it," he was not alone. But how? Rollers, purifiers and the gradual reduction process had sparked a milling revolution but had become old hat. Other advances in milling techniques, while startling, were designed to improve the product after milling. GMI believes it has improved milling techniques—and improved the product at the same time.

General Mills Simplifies the Milling Process

Bellera and Air Spun Are New Names to Age Old Industry

What is described by executives of General Mills, Inc., as a revolutionary new milling process, the most important in more than half a century of flouring history, bursts on the industry skyline after years of conjecture, guessing and pooh-poohism.

Reports of secret doings in Iowa, closure of the Minneapolis mill to visitors, veiled references to a mystery mill, and the announcement of plans to build the most up-to-date mill in the world at Buffalo, motivated the guessing and conjecture. And when whispers of a completely "new" milling process got around, the know-alls pooh-poohed: "There's been nothing new in the milling of flour in 90 years." Air classification and impact milling they conceded as being new, but described them as "after processes."

James F. Bell

GMI technologists were tight-lipped in the face of a barrage of questions. They smiled when fellow-millers ribbed them about the rumors. They had been warned that a chance word could jeopardize millions of dollars and years of time. GMI has suffered in the past, as have other firms, by the premature disclosure of plans.

The new process is called "Bellera," a compliment to James F. Bell and Charles H. Bell, father and son, founder and current president of GMI, respectively. Bellera climaxes a six-generation family history of milling achievement.

The story is one of machines and men. James F. Bell, throughout his many years of service, showed evidence of his forward thinking in the field of technology; Charles H. Bell is respected throughout the company for the faith he shows in men. It's an unbeatable combination.

Tagged on to "Bellera" is the name "Air Spun." Why Air Spun? "Don't know," says a GMI executive, "but it sure sounds descriptive."

And indeed it is descriptive of the light, airy, fairy product which is flour, soft and seductive to the touch. Maybe one day "Air Spun" will join "Eventually, why not now" in the national colloquial language.

Charles H. Bell

What is the secret of the process? Perhaps the most significant factor is the replacement of sifters and purifiers. By what? GMI calls the new machines "compact classifiers." These classifiers help make possible a "stacked mill" in

DRAWINGS FOR NEW BELLERA "Air Spun" milling units being installed at Buffalo are checked by members of construction team. Wearing hats showing GMI insignia are (left) Thomas Imholte, assistant installation supervisor for the milling firm's engineering department, and opposite him, Glenn Martin, at the time installation supervisor, now maintenance superintendent of the company's Buffalo package foods plant. White safety helmets are worn by representatives of Buhler Bros. of Switzerland, builders of flour milling machinery. Appearing second and fourth from left, they are Karl Stier, Buhler research engineer, and Albert Weiss, chief erector.

which pieces of equipment for the necessary steps of milling are placed one after the other in sequence. Wheat starts at the top of the mill and is processed as it flows downward.

Coupled with the plan is a new single roller unit engineered and produced specially for GMI by Buhler Bros. of Uzwil, Switzerland.

Simply stated, the gradual reduction process of milling has depended on a series of grinding operations alternated with sifting and purifying. Wheat and various stocks produced by the operations have flowed downward through g r i n d i n g and separating equipment in a multi-story mill and have been repeatedly hoisted back to the top again, to begin a downward journey.

Direct flow, as incorporated in Bellera, eliminates many elevations of stocks, reducing handling to a minimum.

Less Space Needed

Moreover, equipment for the process requires much less space than conventional equipment. For instance, the capacity at the new Buffalo mill is 14,000 cwt., basis 24 hours. A conventional mill of the same capacity would require 28% more cubic feet of space. GMI technicians say that the equipment is relatively easy to install and simple to operate. Sightswift indicators and push button controls increase the ease and accuracy of operation.

Other "Bellera mills will operate at Minneapolis (6,000 cwt.) and Des Moines (6,000 cwt. combined with Avon).

GMI's own researchers and technicians spark-plugged the idea. But for the engineering and production of the units they turned to Buhler. And GMI men are high in their praise for the work done by the Buhler experts.

It is James F. Bell, with his "Let's simplify" who must be credited with fathering the new concept. But the ideas came from a multitude of anonymous technicians who accepted his challenge to improve a process accepted by millers throughout the world for decades. At one point they tried to break the wheat berry apart by beams of light—and who will stand up and say "Impossible!" In these days of electronic wonders, nothing is impossible.

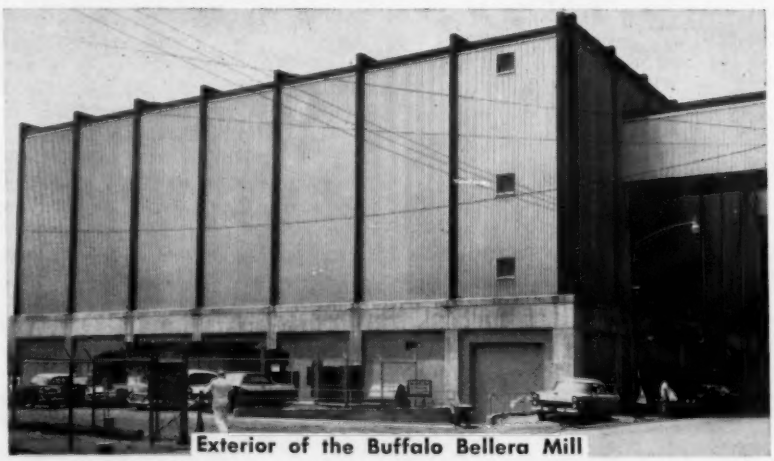
Radical New Flow

And there came a time when their minds zeroed in on one point—a radical new flow, an arrangement of processing steps and equipment that permitted wheat and mill stocks to move directly through the entire process with a minimum of wasteful, non functional handling. The development of compact classifiers was one of the keys. And the result was that the steps hitherto accepted as sacrosanct in the milling business have been cut by half.

That's the story of the means. What of the end? What does it mean for the consumer of flour?

- "Flour giving excellent baking performance with sparkling bright color and sheen," say GMIers enthusiastically. (There's the first lesson in selling —they believe in the product.) The pooh-poohers will scoff off the statement as a publicity blurb. But GMI has not become the biggest milling firm in the nation, perhaps in the world, by making claims it cannot back up.
- How about uniformity? "Amazing," reply the GMI men. And it can be matched to the needs of automated baking equipment and procedures.
- Bellera lends itself to the production of specific flours. And flexibility helps solve the special problems eternally presented by the commercial baker.
- Sanitation is a sine qua non of the process, as it is in all milling methods. But in Bellera simplicity helps and so does pneumatic conveying.
- GMI officials explain, too, that in some crop years when the quality of the grain is below normal, the miller will be in a better position to compensate for nature's failures in order to maintain the production of top quality flour.

While all this has been going on, GMI has not stood still in its other plants—the firm has a productive capacity of 133,700 cwt. a day—and its modernization program is among the most intensive in the nation and promises to remain so. «



Exterior of the Buffalo Bellera Mill

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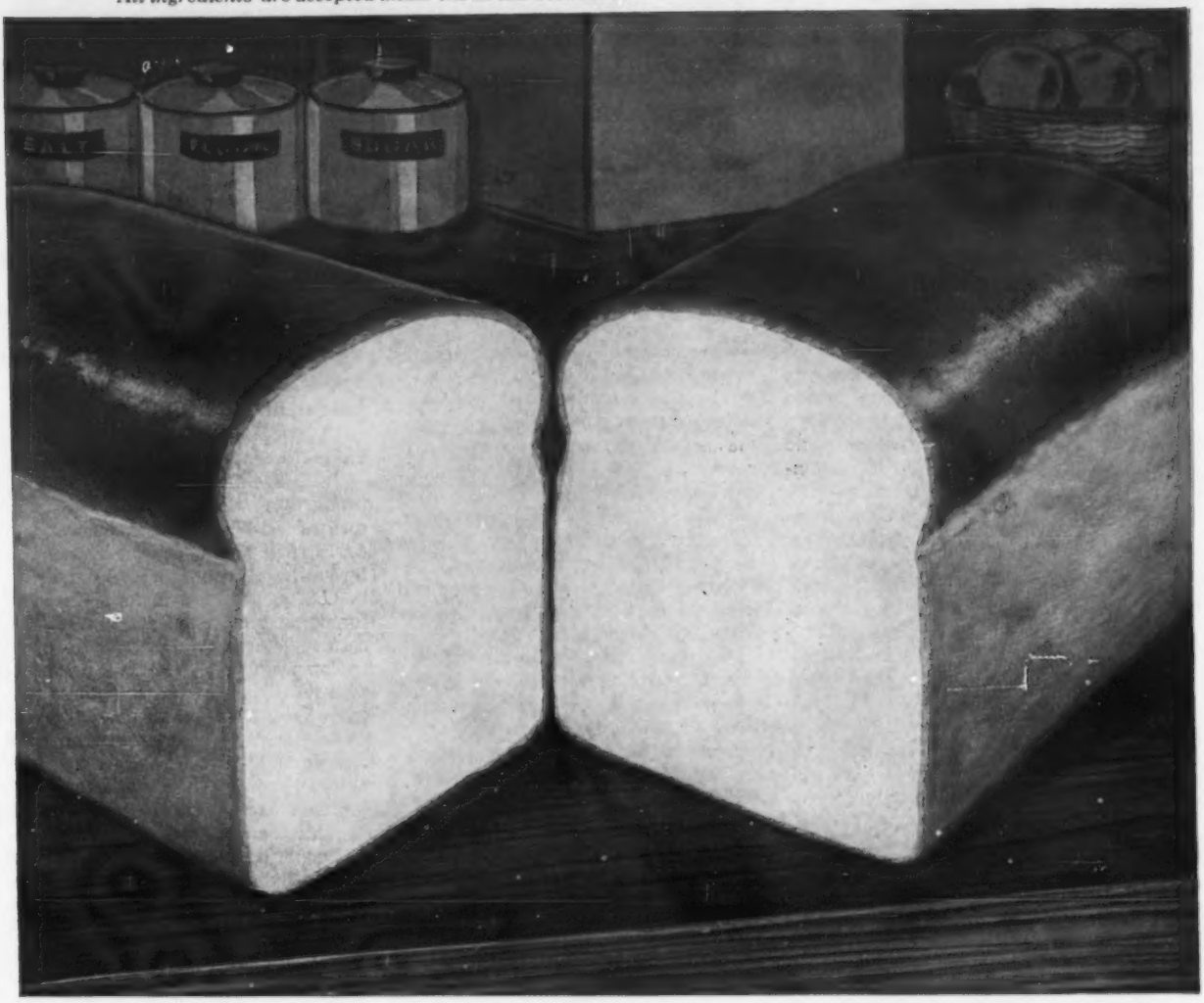

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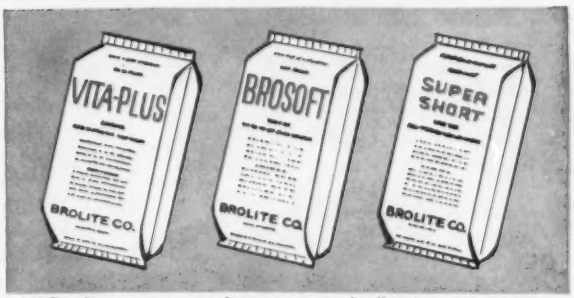

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Political Opportunists Preach 'Agricultural Adjustment' But Surplus Continues to Increase

By F. C. BISSON
Special Correspondent

In the distant summer of 1933 the bright young men in Washington known collectively as the "brain trust" brought into the world an army of alphabetical agencies, including one anemic, seven-month infant delivered by administrative caesarean operation and christened the Agricultural Adjustment Administration.

F. C. Bisson

It was nicknamed the Triple A.

Now, 27 years later, the offspring still is known by the same alphabetical designation. But—owing to complete failure to accomplish its high sounding purpose in life—the Triple A has been dubbed the All American Flop.

In the days of the 1930's there was considerable rivalry for the honor of having fathered the whole idea of using parity as a measuring stick for non-recourse loans and a miscellaneous collection of other vote-fetching accomplishments. But during the intervening years the whole thing has been such a flop that it is doubtful any of the originators wish to claim credit now for what has evolved.

Despite ineffectiveness of the original Triple A and its multitude of amendments, appendages and free wheeling interpretations, still in this year of 1960 polititcal opportunists in both major political parties bend the knee before the sacred cow of parity.

One might describe their blind devotion to having the government in the grain business with a little twist of the Biblical quotation, "And now abideth faith, hope and charity, these three; but the greatest of these is charity."

To these apostles the final word, however, is parity.

More than two years ago Ezra Taft Benson, secretary of agriculture indicted strongly much of the program which he is obligated by law to administer. Some of his salient observations on the subject are economic truisms beyond challenge:

- The legislative goal of price per unit, based on parity, tends to ignore the fact that farmers are interested in net income, not just "price per unit." Net income is the result of price times production, minus costs. Present legislation seeks to maintain prices per unit of commodities through drastic restrictions on the right to produce and market, which in turn, raise production costs per unit.

The long range result of reduced volume and higher unit costs has an adverse effect on net income. A program is needed which will permit farmers to produce without artificial restrictions.

- Parity prices do not indicate how profitable a farm operation may or may not be or how much or how little farmers will produce. Nor do parity calculations, however made, automatically assure for farmers satisfactory or equitable incomes either individually or collectively.
- Commercial farmers are geared to produce more than can be disposed of at current market prices. There is no sign that the current phase of technological revolution in agriculture has run its course. Support levels required by the operation of existing law may be expected to induce still larger production in the future.
- During the past quarter century basic commodities which bring in 23% of the nation's farm income have accounted for 55% of the program's costs. These costs would undoubtedly be borne willingly if the programs solved the problems. But these problems have not been solved.

Thus spoke Mr. Benson.

A Seventh Wonder?

The Commodity Credit Corp., a government instrument by which billions of tax dollars have been poured down the drain through non-recourse loan provisions of the Triple A, should be ranked with the Seven Wonders of the World—for it is a modern version of the Colossus of Rhodes. It stands, like the colossus, with one foot planted firmly in the U.S. treasury and the other on the neck of the American farmer.

Wheat and Corn

Let's look at the problem from an angle closer to home.

July 1 official estimates of crop production indicates a prospective outturn of 1,347,468,000 bu. wheat and 4,079,151,000 bu. corn. Those two figures have been exceeded only once in U.S. agricultural history—in 1958 for wheat production and in 1959 for corn.

Comparing the 1960 crop prospects with the 10-year average of these two grains, we find that the country will harvest a wheat crop more than one-quarter billion bushels larger than the 1949-58 average. This year's corn harvest will exceed the 10-year average by more than 800 million bushels.

Comparing production for this year with the size of the crops grown when the original "farm relief" legislation was passed shows that wheat production in the early 1930's was down to about 650 million bushels, or less than half the current outlook. Corn was averaging 2.5 billion bushels, or 1.5 billion less than current prospects.

Lo, the Surplus!

From all of this it is easy to understand why all the effort to pull prices up by their boot straps has been an utter failure. In point of fact, the situation has been aggravated greatly.

On May 31 of the current year CCC had $7,300,811,932 tied up in surplus commodities, or $1,195,590,000 more than a year earlier. This of course does not include outstanding non-recourse loan collateral.

Breaking down the figures, the 1960 CCC inventory included 1,212,879,510 bu. wheat, 1,188,235,902 bu. corn and a miscellaneous collection of wheat flour, oats, barley, grain sorghums, rice, dried milk, butter, soybeans, peanuts, cheese, dry edible beans, flax, honey, linseed oil, tung oil, tobacco and strategic materials.

By the time all the 1959 corn loans are defaulted (probably half a billion bushels) this will push the federal inventory of that particular grain to almost 1.75 billion bushels. «

Thomas M. Crosby

The pressure of other business affairs has called Thomas M. Crosby away from the active management team of General Mills, Inc., but his talents acquired over more than 20 years of GMI service will still be available. He has been elected to the firm's board of directors. Starting with the company in 1939, he took time out during the war to serve with the Marine Corps, but returned in 1945. Among his many duties—both civic and business-wise—Mr. Crosby numbers a term as general chairman of the Community Fund Drive in Minneapolis in 1959. He's on the board of Northwestern National Life Insurance Co., Minnesota and Ontario Paper Co., and the S. T. McKnight Co. He now will take up duties as vice president of S. T. McKnight Co.

T. M. Crosby

W. L. Yearsley

One of Chase Bag Co.'s veteran salesmen, W. L. "Bill" Yearsley, is moving to Denver, where he will take charge of the sales office. He's spent most of his time in Des Moines since joining the firm back in 1937, and has built a wide acquaintance with millers, feed men, the agricultural trade, and others. «

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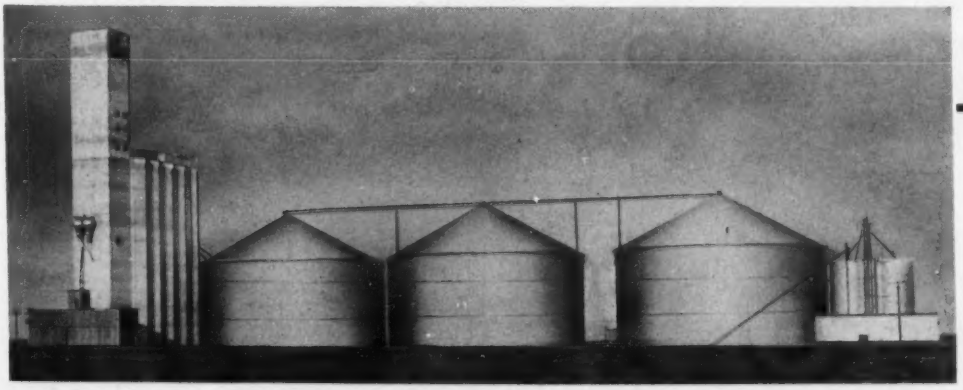

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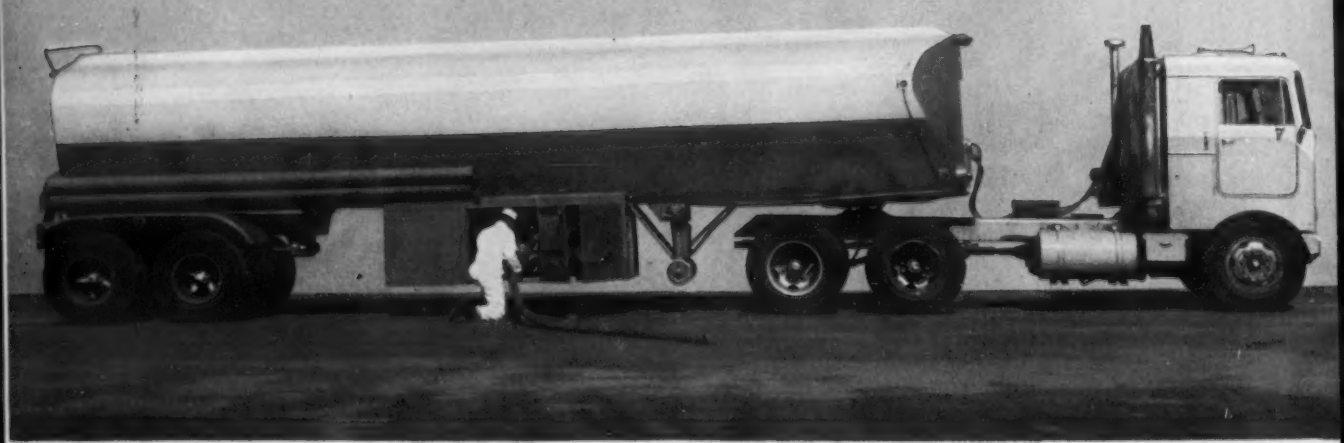

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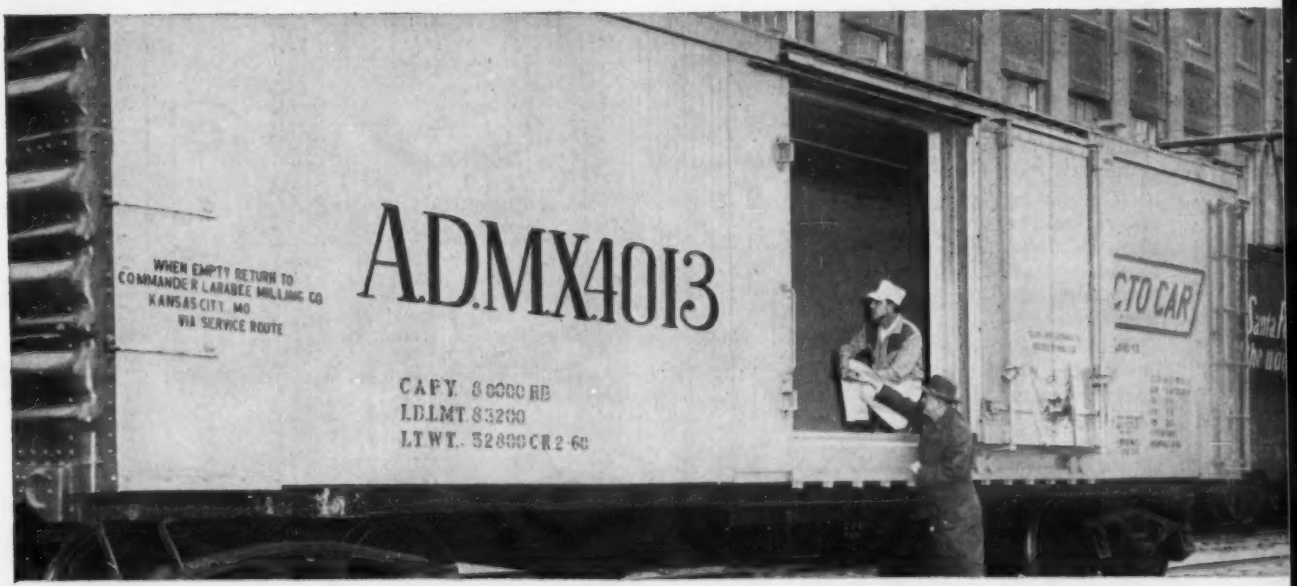

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GMI Sales in 1959-60 Second Best of Record

General Mills, Inc., has issued its annual financial report showing company sales for the fiscal year ended May 31 as second best in company history. Earnings dipped because of intense competition in the lines GMI serves, but top officials term these factors "only a pause in the company's progress."

The GMI pattern of sales and earnings—with its mixed blessings—may well be the barometer for other annual financial statements which will be coming along in short order. More intensive competition, a closer scrutiny of sales and cost factors, but optimism for widespread expansion in the 60's, seem to be the trend.

Gross sales amounted to $537,818,000, exceeded only by the 1958-59 all-time-high figure of $545,998,000. Earnings for the year now closed were at $11,515,000, a dip of $5,302,000 from the previous year's record figure of $16,817,000.

Net earnings on common stock for 1959-60 were $1.46 a share compared with $2.26 in the earlier year after adjustment for a three-for-one split in common stock. However, dividends paid in fiscal 1959-60 totaled $9,224,000, the highest of record.

Federal, state and local taxes paid by GMI during the past fiscal year amounted to $16,706,000.

Competition Cited

The statement that the year now behind GMI was only a pause in company progress was made by Gerald S. Kennedy, board chairman, and Charles H. Bell, president, in a prefacing letter to shareholders which accompanied the annual report.

"The dip in earnings for 1959-60 resulted mainly from intense competition in flour, feed, cake mix, pet food, and soybean operations, which significantly reduced profit margins," they said.

Despite this, they reported, all but one of the seven operating divisions turned in a profit. Only the feed division, suffering from the depressed economy in the poultry industry, showed a loss.

Major developments during the past year underscored the company's trend to wider diversification. These included acquisitions of the businesses of Latham and Co., Ltd., English cake mix and corn flake manufacturing company; American Crab Meat Co., Boston; Magnaflux Corp., Chicago, and, effective June 1, 1960, The Daven Co. of Livingston, N.J.

The company also extended its overseas flour milling operations through an arrangement for production of Gold Medal flour in Guatemala. «

General Mills, Inc., and Subsidiaries

RESULTS OF OPERATIONS

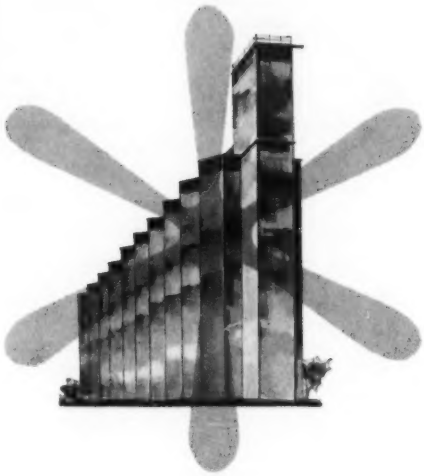
Year ended May 31:	1960	1959
Sales of products and services	$537,818,050	$545,998,493
COSTS:		
Cost of products and services sold, exclusive of items shown below	405,256,597	405,603,205
Depreciation	7,680,720	6,965,597
Interest	2,501,660	1,813,674
Contributions to employees' retirement plans	2,434,686	2,645,768
Profit sharing distribution		1,251,178
Selling, general and administrative expenses	97,582,237	93,625,605
Federal taxes on income	10,847,000	17,276,000
Total costs	526,302,900	529,181,027
Earnings for the year	$ 11,515,150	$ 16,817,466

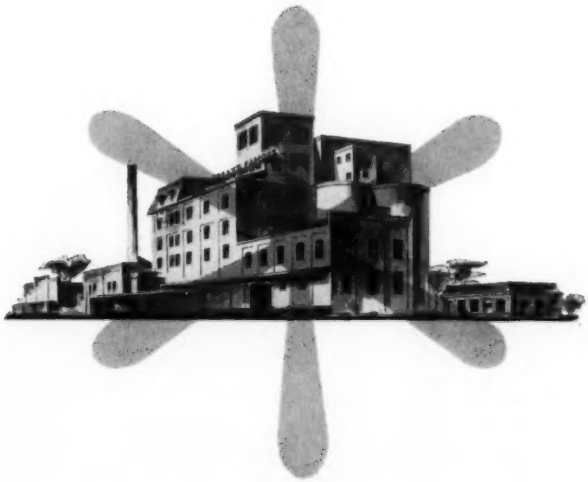
EARNINGS EMPLOYED IN THE BUSINESS

Year ended May 31:	1960	1959
Earnings for the year	$ 11,515,150	$ 16,817,466
DIVIDENDS:		
5% preferred stock	1,107,365	1,106,870
Common stock ($1.15 per share in 1960, $1 per share in 1959 after adjustment for split)	8,116,695	6,892,136
Total dividends	9,224,060	7,999,006
Earnings in excess of dividends	2,291,090	8,818,460
Earnings employed at beginning of year	90,367,032	81,548,572
Earnings employed at end of year (Note 8)	$ 92,658,122	$ 90,367,032

FINANCIAL POSITION

May 31:	1960	1959
CURRENT ASSETS:		
Cash	$ 15,210,596	$ 18,163,388
U.S. government and other short term obligations (at cost)		12,039,267
Receivables	42,515,120	48,015,408
Inventories	55,878,939	52,192,059
Total current assets	113,604,655	130,410,122
CURRENT LIABILITIES:		
Accounts payable and accrued expenses	22,597,488	22,081,413
Accrued taxes	12,512,675	17,106,740
Thrift accounts of officers and employees	3,539,386	3,308,694
Dividends payable	276,841	276,841
Total current liabilities	38,926,390	42,773,688
Working capital	74,678,265	87,636,434
OTHER ASSETS:		
Sundry costs chargeable to future periods	7,267,738	5,026,949
Land, buildings and equipment	121,048,368	106,802,704
Miscellaneous assets	2,790,482	2,265,162
Goodwill, trade-marks, trade names and other intangibles	3,969,969	2,425,919
Total other assets	135,076,557	116,520,734
Working capital and other assets	209,754,822	204,157,168
LONG TERM DEBT AND RESERVES:		
Long term debt	45,200,000	45,000,000
Reserves for self-insurance, price declines and other purposes	4,959,164	5,059,165
Total	50,159,164	50,059,165
Excess of assets over liabilities and reserves	$159,595,658	$154,098,003
STOCKHOLDERS' EQUITIES:		
Preferred stock—5% cumulative	$ 22,147,300	$ 22,147,300
Common stock:		
Issued	45,122,462	41,973,030
Earnings employed in the business	92,658,122	90,367,032
Treasury stock (deduct)	(332,226)	(389,359)
Total	137,448,358	131,950,703
Total stockholders' equities	$159,595,658	$154,098,003





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'Rolling Donuts' Is Big Operation In a Small Space

Putting doughnuts on wheels is paying off handsomely for Jay D. Tyree of Springfield, Ohio, founder and president of Rolling Donuts, Inc. The new franchise operation already has more than 40 independent enterprisers on the road frying, frosting and selling hot doughnuts from mobile kitchens in five states.

In addition to franchising other businessmen, Mr. Tyree operates two of the rolling kitchens himself. His business—like that of his associates—comes from curbside parking places in residential neighborhoods, in front of factories and schools at lunch hours, outside athletic fields, in business areas and shopping centers — wherever people gather and can be tempted with the deep-fried delicacies.

Equipment built into the Volkswagen "Kombis," which Mr. Tyree selected for economy and efficiency, include a double-unit stainless steel kitchen sink and small hand sink, water storage tank and an electrical generator which powers the built-in frying unit and exhaust fan.

The interior walls and ceilings of the mobile kitchens are of stainless steel and formica for cleanliness and eye-appeal. The doughnut fleet's insignia is a spare tire painted to resemble a doughnut—mounted on the front of the vehicle.

Rolling Donut operators are furnished everything they need from specially equipped vehicles to premixed doughnut dough. Owner Tyree tested other panel trucks before standardizing on the Volkswagens, and reports that both truck and generator can be operated for about $3 a day. This factor he considers of high importance because operators gross only about $75 a day—making economy of operation a primary factor.

And women drivers—of which Mr. Tyree has quite a number—like the handling and parking ability of the vehicles. «

JAY D. TYREE, founder and president of Rolling Donuts, Inc., is pictured at work inside one of his mobile kitchens on wheels. He now has more than 40 franchised operators making and vending doughnuts from the compact vehicles.

Food Firm Expands

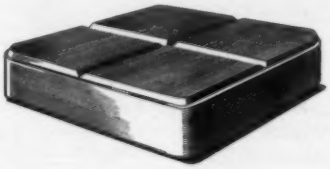
Crowe Specialty Foods, Denver, formerly Crowe Nut & Baking Co., has announced plans for an $80,000 food processing plant to be built in Denver.

The structure will provide 19,500 sq. ft. of space on 25,000 sq. ft. of property valued at $34,000.

Marvin N. Crowe, president, said the firm makes corn chips and corn puff snacks. The baker division makes English muffins, oatmeal cookies and Swanky Sweets, a Danish roll. «

The Wafer with the Warranty That Protects YOU

Only Roche* makes it.
It's SQUARE.
Roche originated it.
Roche guarantees it.



Roche engraves the Roche name on each wafer to make sure you always get the genuine square bread enrichment wafer guaranteed and made only by Roche.

Roche identifies each box of genuine Roche square wafers with the name Roche on each end of every box

Roche guarantees each Roche square wafer with this warranty

*ROCHE—Reg. U.S. Pat. Off.

SQUARE BREAD ENRICHMENT WAFERS
are guaranteed by Hoffmann-La Roche Inc. to give you

1. ASSURED POTENCY	2. QUICK DISINTEGRATION	3. SUPER-THOROUGH DIFFUSION	4. FINER, MORE BUOYANT PARTICLES	5. CLEAN, EVEN BREAK
Enrichment assured when SQUARE wafers are used as directed.	Complete disintegration in agitated water in yeast emulsifier.	Flour-fine particles insure even distribution throughout each loaf.	SQUARE wafers give you thousands of particles, longer suspension.	Wafers break clean into halves and quarters, for odd-sized doughs.

Look for the name ROCHE—your guarantee on the Wafer with the Warranty. Order from your yeast company salesman today.

FINE CHEMICALS DIVISION • HOFFMANN-LA ROCHE INC • NUTLEY 10, NEW JERSEY

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Trouble Shooter

Commercial Baking Problems

Divider Oil

What is the proper grease to use on a six-pocket divider? We have been using a good grade of shortening. Recently, the machine salesman told us we would have better scaling by using a divider oil. What kind of oil did he mean? Where can we obtain some? Why is this oil better than the good shortening we are using?—**B. N., Kansas.**

The oil the salesman had in mind is a petrolatum product—a highly refined mineral oil with no taste or flavor. It has the color of water and no food value.

Mineral oil is a very good lubricant because it does not discolor the dough, does not form a film or gum on the working parts, does not turn rancid. None of the shortenings have all these properties. Mineral oil can be purchased from your supply house or directly from the manufacturers in containers of various sizes. Mineral oil is not used for the moving shafts and bearings. It is used only for the dough hopper, knife, plunger and pockets. Only enough should be used for efficient operation of the machine. An excess will have a tendency to create holes in bread.

Yeast-Raised Doughs

It is my impression that sugar placed in a dough batch helps the yeast work faster. If this is so, why is it that, in sweet rolls and coffee cakes, more yeast is needed to ferment dough for the same time as a bread dough containing much less sugar?—**T. F., Iowa.**

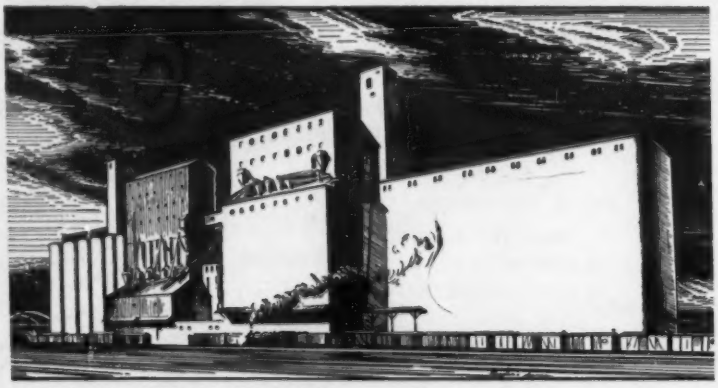
Sugar in some form is very necessary to fermentation of bread and roll doughs. During fermentation part of the sugar is changed into alcohol and carbon dioxide gas. It is this gas that raises the dough. When using up to 3% sugar, based on the weight of the flour, fermentation is speeded up. Over 3% retards fermentation.

All other conditions being equal, a dough with 3% sugar will produce a greater quantity of gas in a normal time than a dough with 15% sugar. To age a sweet roll dough properly in the same length of time as bread dough requires more yeast. This is due to the excess sugar acting as a preservative or holding back the yeast action.

An excellent example of the preservative power of sugar is the fact that jams and jellies can be kept almost indefinitely exposed to the air. These products are high in sugar and resist bacterial and yeast action. Granulated sugar is added to milk to increase its keeping qualities.

WHAT'S YOUR PROBLEM?

From his many years of experience as a practicing baker and production authority, A. J. Vander Voort, head of the Dunwoody School of Baking and technical editor, has compiled a book of "trouble spots" now valued highly by the baking industry. The Bakeshop Trouble Shooter Book, now in its eighth printing, classifies hundreds of everyday problems and their solutions. For $2.00 bakers can have at their fingertips a quick source of information for discovering their problems and solving them. Copies may be purchased from the Reader Service Department, THE Northwestern MILLER, P.O. Box 67, Minneapolis 40, Minn. Readers are invited to submit their production problems either to this publication or to Mr. Vander Voort at Dunwoody, 818 Wayzata Blvd., Minneapolis 3, Minn.



ROCK ISLAND ELEVATOR—7,500,000 BUS.

SIMONDS • SHIELDS • THEIS

Grain Company

BOARD OF TRADE BLDG. • KANSAS CITY, MISSOURI

Serving the Milling Industry for 76 Years

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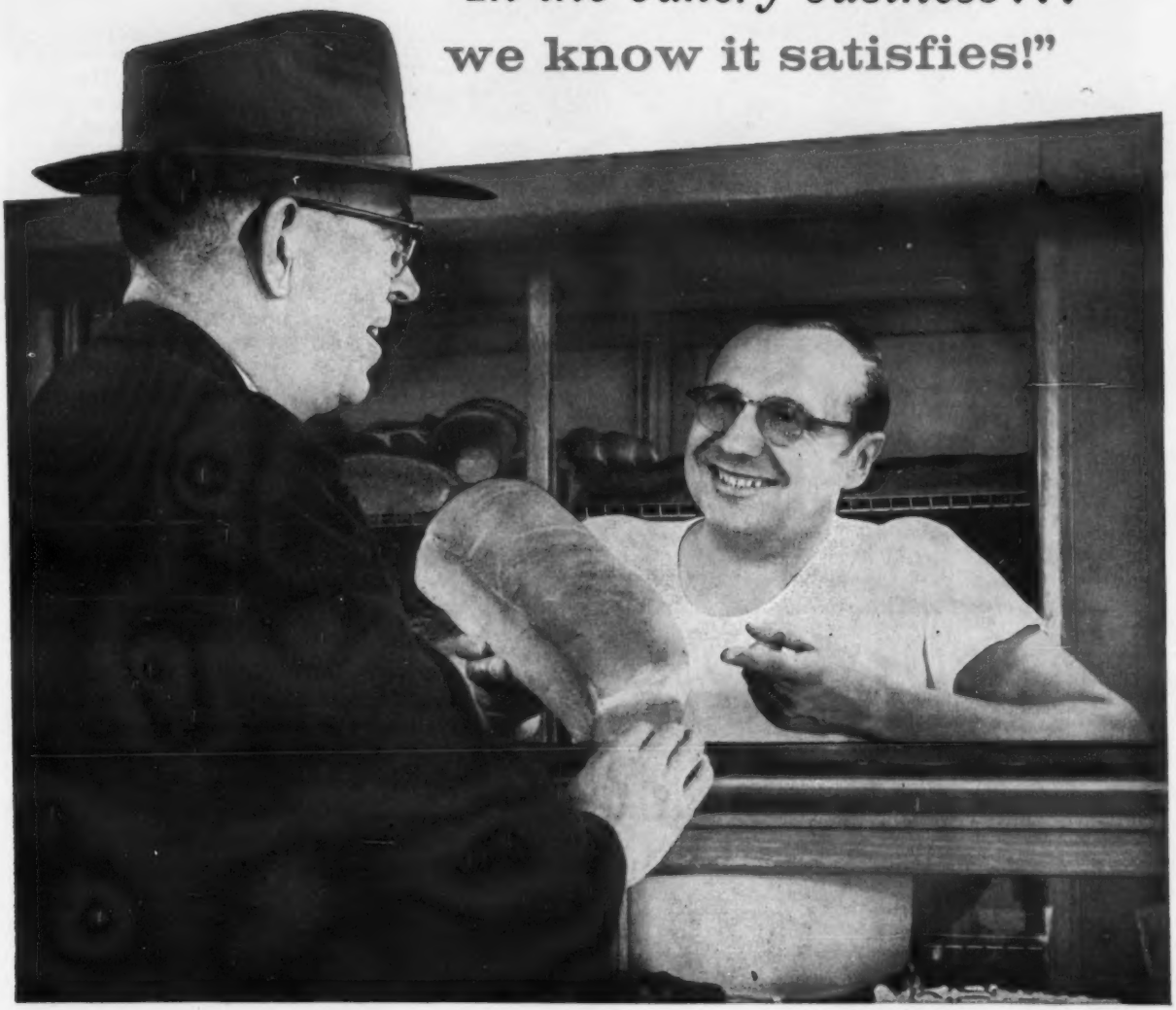
J. P. Baumgartner, Manager Country Elevators

"In the bakery business . . .
we know it satisfies!"



John Lukach, Northbrook Bakery, Minneapolis, shows "Mr. American Farmer" where the story of "From Field to Flour" ends.

This is what King Midas has done: "From Field to Flour." A successful result of combining these methods; to buy the best quality wheat obtainable; to process it with the most up-to-date milling equipment; to protect and maintain quality by scientific methods and milling experience; and the last and most important is to satisfy the bakers' needs.

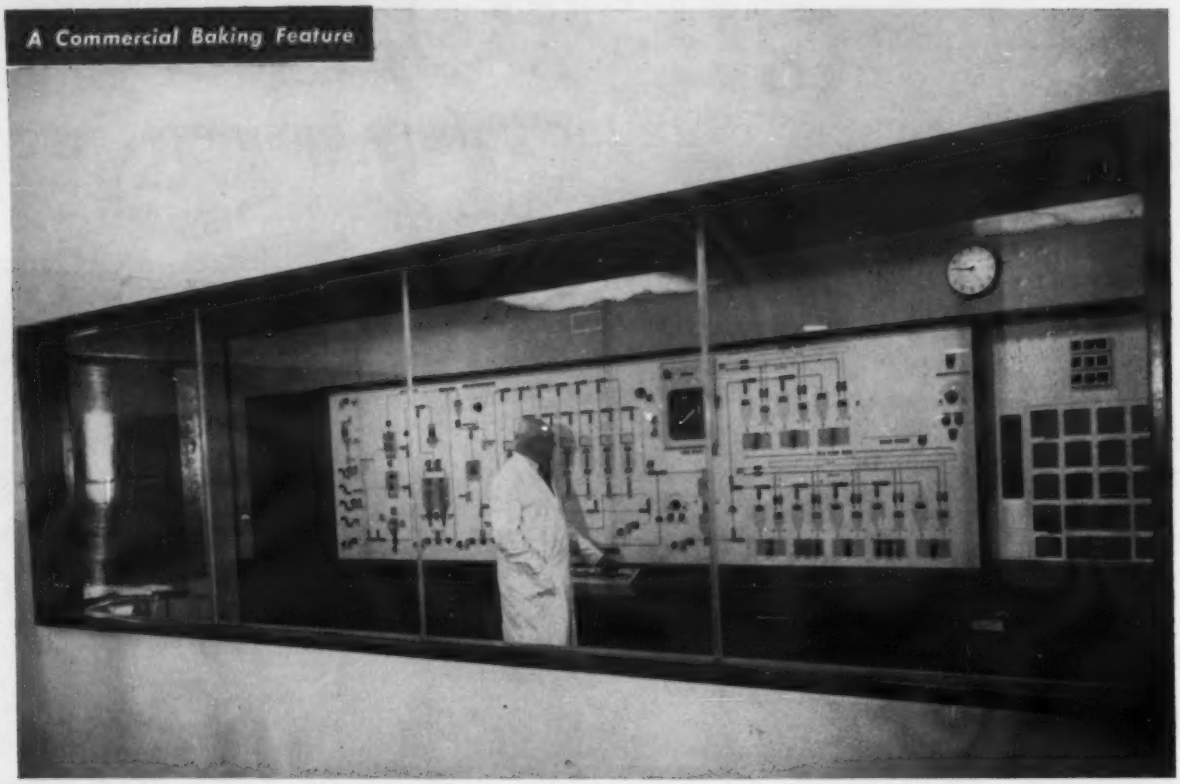
Bakers both large and small know that this is the King Midas story that is enacted for them each day.

King Midas FLOUR MILLS

MINNEAPOLIS PV MINNESOTA

On the job when it counts . . .
AMERICAN NATIONAL RED CROSS

A Commercial Baking Feature



Automation 'on the Job' at Carr's

An Established English Baking Firm Puts Modern Methods to Work

The cookie baking firm of Carr & Co., Ltd., has modernized the operation of its flour handling plant at Carlisle, England—a master job of engineering design just short of breathtaking in its streamlining of old procedures.

Heart of the automated system is a central control room panel, as in similar systems. From this point the Carr installation moves into its own sphere of mechanical marvels.

Approximately 80 miles of wire, scores of micro switches and almost 200 relays take the place of manpower—measuring flour, glucose, syrup, shortening — and sending these along on silent circuits to their appointed places. The plant is even designed to work bulk handling of sugar into its operation.

When the operator of an oven requests a recipe the control system goes to work. In a short time his ingredients are put together and sent along. An ultra-modern device named the "Programmer" quietly scans all the ovens until its electrical "brain" finds the one where the request was made.

Thomas Robinson & Son, Ltd., Rochdale, did the main contracting for the plant. Electrical weighing, logic and control equipment was designed and supplied by Elliott Bros., Ltd., London, a member of the Elliott-Automation Group, working in close cooperation with the Robinson designers.

Carr & Co., founded in 1831, became meshed in the typical position of a venerable, growing firm crowded into outdated structures at a time when modern methods of production appeared necessary. After considerable deliberation, it decided to blend the existing structure with the new operating equipment so sorely desired.

At one time, by the classic methods of hand operation, Carr produced some 400 sizes, shapes and kinds of specialized cookies. It is a credit to the ingenuity of all concerned that about 80 different products are still manufactured, making the firm one of those still highly specialized.

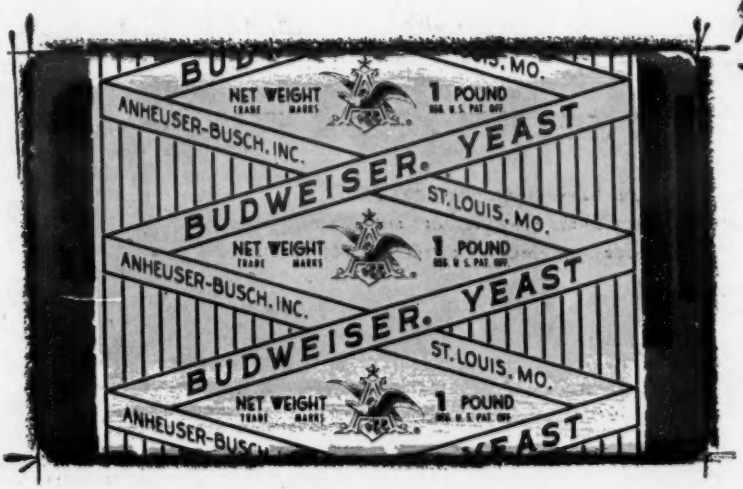
● The plant is designed for the intake of different types of flour either bagged or in bulk.

● Sample testing of the flour after delivery to either of two test bins

Carr & Co., Ltd., has installed the latest equipment in its bulk flour handling plant, carefully integrating existing structures with the most current controls and devices. The change has carried through to the oven delivery stage of the baking process with the aid of a master control panel and an intricate system of checks, balances and blending of ingredients and processes. The designing and engineering were done in close cooperation with the engineering firm of Thomas Robinson & Son, Ltd.

GOOD BREAD is the product of PERFECT FERMENTATION

No expense will ever be spared by Anheuser-Busch in producing the finest bakers yeast on earth.



is possible, and it can easily return deliveries that are rejected.

● Storage in different bins is incorporated as part of the system. So is blending.

● Circuits weigh and deliver requested batches of ingredients to the dough mixers which feed the production lines.

● There are some controls for precautionary treatment of the flour delivered to the plant.

● The main control panel incorporates a system of punched cards and printout facilities to record the day's work. Operation of the Carr plant can be controlled either by completely automatic functioning of the control panel or, if necessary, by a semi-automatic operation which allows for the closing down of particular sections.

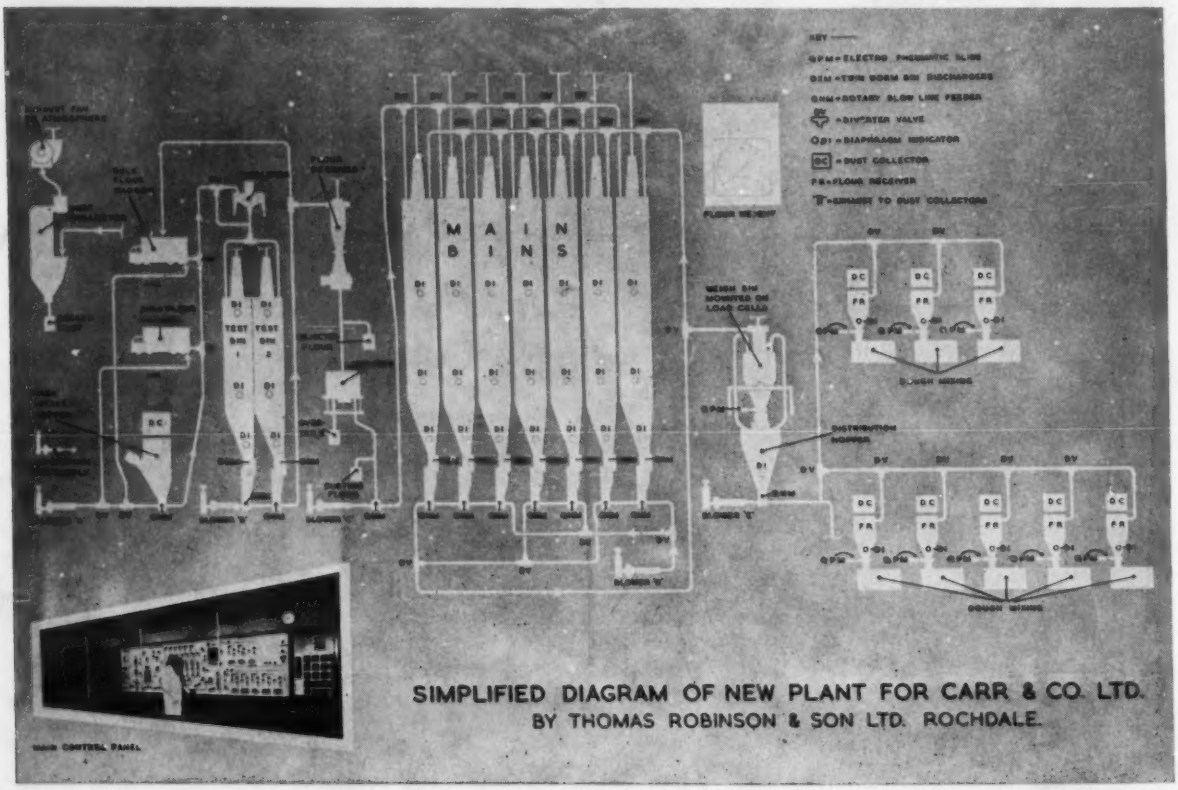
Carr's own engineering department studied and stated its own requirements for the modernization, and one of their requirements was that the new installations be designed to fit compactly into the buildings largely in existence already.

Compactness and versatility of the plant within this existing framework has been made possible by use of the various standard units in the Robinson pneumatic conveying system. These are designed both for easy local control and for the application of complete automatic control. Elliott engineers, too, worked closely with the whole plan.

Two separate intake points are provided from bulk vehicles delivering at the ground floor level in the building which houses the test bins and the main storage bins.

One vehicle can be discharged while a second is brought into position and coupled. Vehicles can be discharged by their own engine-powered blowing units, but a land-based blowing unit has been provided for normal use to minimize noise, and for discharging vehicles not fitted with their own compressors. Intake from a bulk vehicle to the test bins is at the rate of 18 tons an hour.

A sack intake unit is provided as an



SIMPLIFIED DIAGRAM OF NEW PLANT FOR CARR & CO. LTD. BY THOMAS ROBINSON & SON LTD. ROCHDALE.

Strategically located TO SERVE YOUR FLOUR NEEDS!

For over 74 years, Eckhart-milled flours have been the standard of quality with bakers who want the very best, always. Fast service and competitive prices. All flours are individually milled for superior performance.

Let us quote on your flour needs!

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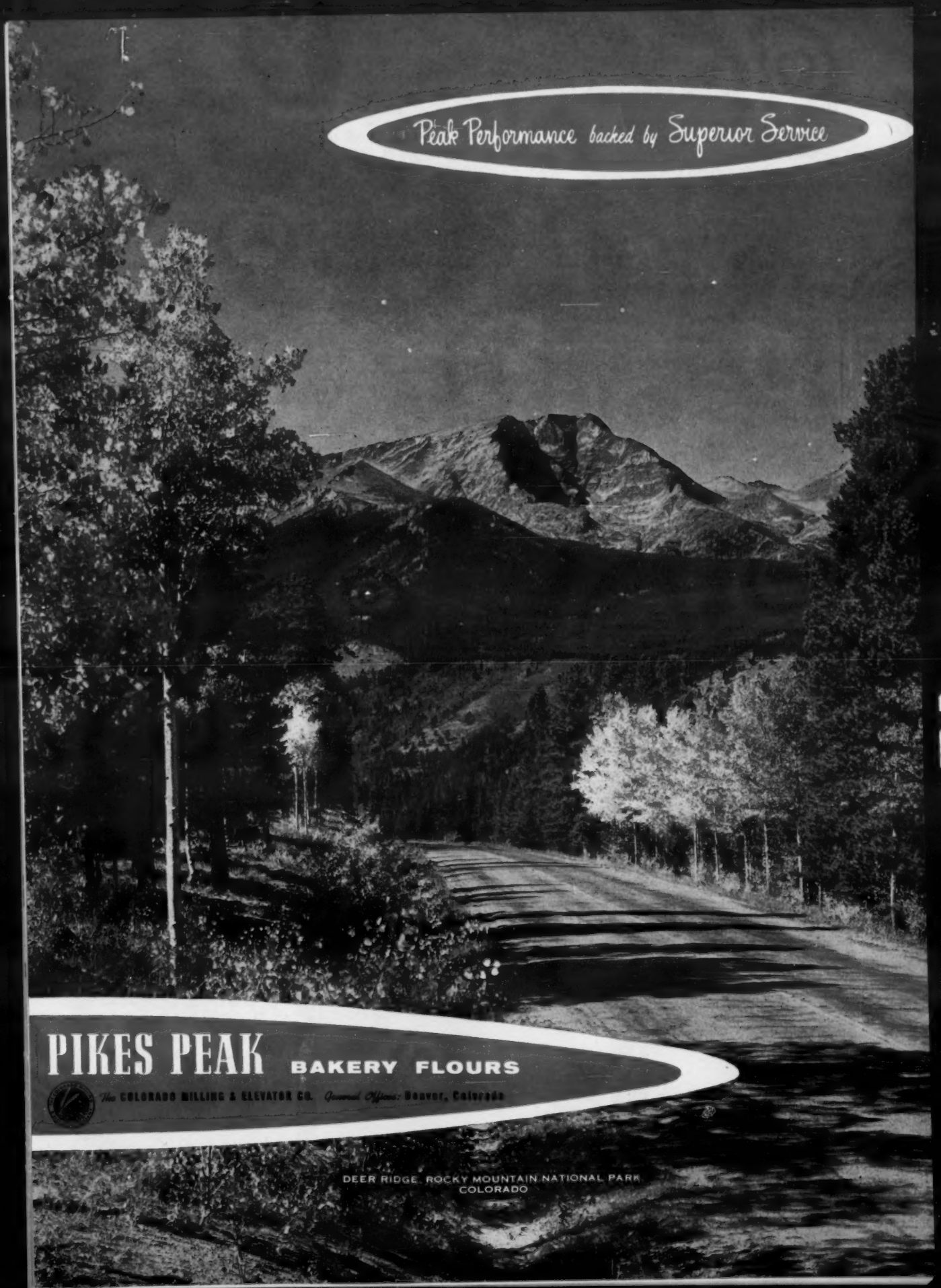
1300 CARROLL AVE. · CHICAGO 7, ILL.

- rye flours
- whole wheat flours
- spring and hard winter wheat flours
- soft wheat flours for cakes, cookies, crackers

SALES OFFICES IN PRINCIPAL CITIES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PIKES PEAK
BAKERY FLOURS
The COLORADO MILLING & ELEVATOR CO. General Offices: Denver, Colorado
DEER RIDGE, ROCKY MOUNTAIN NATIONAL PARK
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alternative. It incorporates a dust collector, and is intended for handling flour in sacks from the granary floor at the rate of 5 tons an hour. All this flour then passes through an entoleter to destroy non-virus, living organisms.

When a bulk vehicle is coupled, the driver automatically requests the main controller to select the bin to be charged. On receipt of information that this has been done, the driver takes complete control over the discharge of his load into the pre-selected bin. Individual indicators give the controller a picture of the operation in progress. Local controls also are provided, and either the vehicle operator or the main controller can initiate a change of operation.

Test Bins Described

Two test bins, each capable of accepting a full vehicle load of some 15 tons, are provided. One of these can be emptied while the other is being filled, reducing delays to a minimum.

If samples taken from the test bins are rejected, contents of the bin are returned to the bulk truck, or for re-sacking, by a return blowing line.

Seven main storage bins, each 47 ft. high with a capacity of 31 tons, have been installed in the existing granary building. Flour from the test bins is re-dressed on the Robinson Minisifter before being blown into the specified storage bin. Choice of bin is made possible by remote-controlled pneumatically-operated valves which divert flour from the main conveying line into the specified bin.

Four main operations are carried out in this part of the plant, all controlled from the central panel. They are the delivery of flour from either test bin to any of the main storage bins; delivery of flour from a test bin to a bagging point for dusting flour; delivery of flour from a test bin to a reject bagging point, or back to a bulk vehicle.

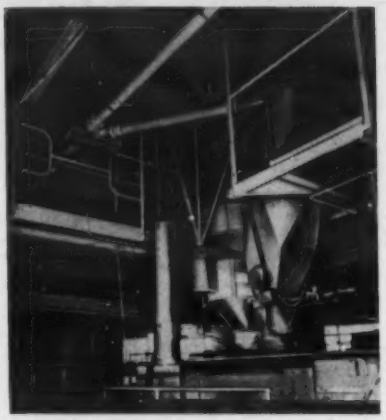
Selector Switch

A switch on the main control panel enables the controller to select the operation required. By pressing the starter button on the required test bin—reproduced in mimic form on the panel—the correct delivery route is set up automatically and the necessary motors started in correct order.

A pressure switch in the conveying line from the test bins actuates a light on the panel when flour is flowing in the line. The controller then releases the start button and the operation continues automatically. Various local controls are provided for particular circumstances. As with other sections of the plant, the distribution section is fully interlocked. For example, the start button will be inoperative if a full main bin is selected, or if the correct route is not set up.

A special arrangement of solenoid-operated air valves prevents arching of flour in any of the bins. Bin level indicators, fitted at three points on each bin, automatically bring about the introduction of compressed air to break down any arch of flour which might occur, at the same time giving remote indication of the level of flour in the bin.

The bins are discharged by twin worm bin dischargers which feed the flour into intermediate hoppers. The hoppers are mounted directly above blow line rotary feeders, specially designed to feed powdered materials into pressure conveying lines without excessive loss of the conveying air.



FLOUR RECEIVERS at Carr's are mounted above the dough mixers. Each receiver is fed by diverter valve from the conveying line delivering flour to this section. An electro-pneumatic slide is mounted at the foot of each receiver and a dust collector at the head. Diaphragm-type indicators immediately above the bin slide show availability of stock on the main control panel.

Selective conveying of flour from bins to the batch weigher is done by electro-pneumatic diverter valves inserted at appropriate points in the conveying line.

Batch Weighing Section

The batch weighing bin is mounted on load cells and will weigh batches up to a maximum of 800 lb. Each batch can consist of various weights of up to seven different types of flour automatically selected from the seven types or blends of flour in the main storage bins.

All Grades
RYE FLOUR
1000 cwts. Flour—250 cwts. Meal
GLOBE MILLING COMPANY
WATERTOWN, WISCONSIN

Michigan Soft Wheat Flour
Plain and Self-Rising
King Milling Company
LOWELL, MICHIGAN

YOU CAN DEPEND ON
LA GRANGE FLOURS
BULK OR SACK LOADING
LA GRANGE MILLS
RED WING, MINNESOTA

MENNEL
P.S.* for Hard Spring and Winter Wheat. Cake and Pastry Flours. Cracker and Cookie Flours.
* Personalized Service
THE MENNEL MILLING COMPANY
FOSTORIA, OHIO

all white
BIRCH
7-ply 3/8"
PEEL BOARD
uniform grain, rounded edges outlasts all other boards
LOW, LOW PRICE
FAST, FAST DELIVERY
from east and west coast warehouses
Write, Wire, Phone TODAY
north american plywood CORPORATION
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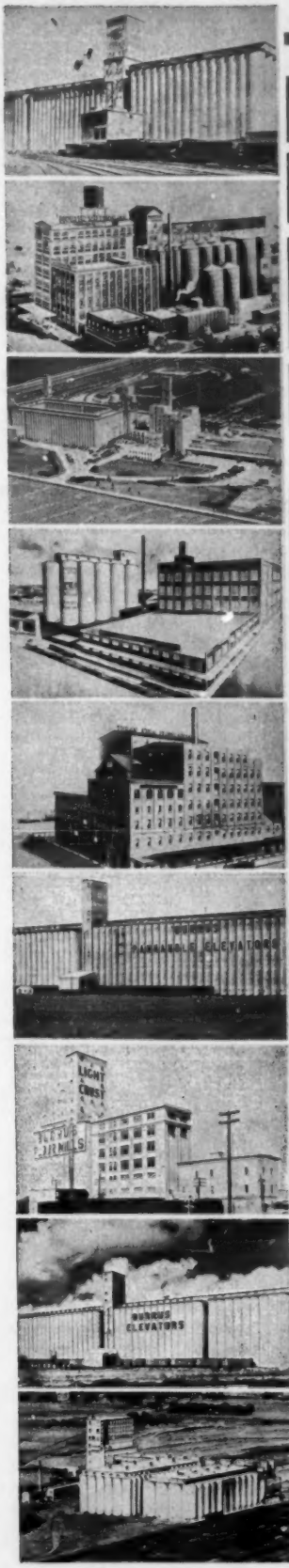


AVAILABILITY+

AVAILABILITY
PLUS SELECTIVITY
MEANS

BETTER WHEAT, BETTER FLOUR!

DRINKWATER

It's really quite a simple proposition: If you have a vast amount of premium wheat to choose from, you naturally can afford to be much more selective. This is the situation with Morten Milling Co., thanks to its extensive network of grain elevators. From this enormous supply of available wheat, the highly trained technicians in Morten's laboratories rigidly select only the best wheat to go into Morten flours under scientifically controlled conditions. Only a highly systematized and flexible program of wheat availability makes such true selectivity possible. Morten Milling Company — the perennial pacesetter for the milling of top-quality bakery flour!

SHORT PATENT | WHOLE WHEAT | DRINKWATER REGULAR, SEMI-SHORT | WHOLE WHEAT | HI-GLUTEN

MORTEN MILLING CO., DALLAS, TEXAS

A Division of Burrus Mills, Incorporated

'Push-Button' Handling (continued)

The weight of each flour is pre-selected by punch cards. When this selected weight is reached, a diverter valve immediately prior to the weigh bin is automatically switched over. The wheel valve below the storage bin from which flour is being taken is automatically stopped, but the blower continues to run. Flour remaining in the conveyor line is thus diverted into a return line and carried back to the bin of origin. This process can be automatically repeated up to seven times, depending on the desired recipe of the final batch.

The requested batch of flour in the weigher now is discharged into a distribution hopper immediately below via an electro-pneumatic bin discharger slide. A rotary feeder at the base of this hopper feeds the batch conveying line, which distributes flour to the dough mixers at different points in the cookie factory.

The weight of each particular flour is given on an indicator on the control panel and the recipes of batches required are selected automatically by means of a punch card system which enables the oven operator to request a batch to the recipe of his particular oven, or it can be selected manually by the controller.

The weighed batches of flour are delivered to receivers mounted above dough mixers located in two main mixing rooms. Each receiver incorporates its own dust collector unit and is discharged by an electro-pneumatic bin discharger.

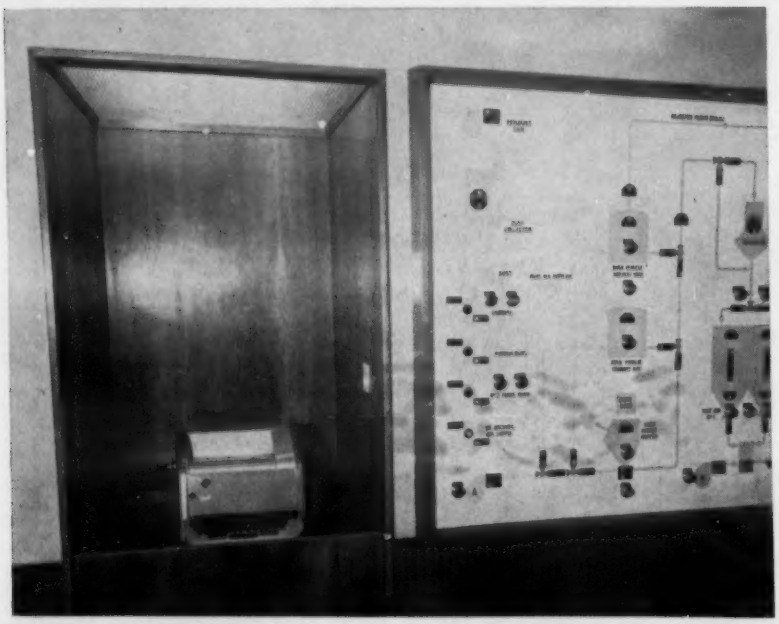
The correct distribution path for feeding a weighed batch to a receiver is determined by the automatic programmer involving the punch card system. A manually selected recipe can be distributed by a simple selector switch and starter button on the control panel.

Batch Requesting

Delivery of batches to the dough mixers is at either request of the oven operators or the operation of semi-random selection equipment built into the programming unit. A local indicator informs the oven operator when a batch has been delivered. By pressing a discharge button he delivers the batch to the mixer.

The type of batch delivered to receivers is governed by punched recipe cards, and over-all control of the sequence of deliveries is again the work of the main controller.

A recipe consists of a blend of any of the seven grades of flour, with the possible addition of milled and granulated sugar. Other ingredients are added during mixing.



THIS TELEPRINTER in an alcove adjacent to the control room at Carr & Co., Ltd., retains a complete record of ovens selected and the recipes supplied. Among other information, it compiles an immediate stock check on total weights of ingredients.

Selection and control of recipes can be carried out in either of two ways, i.e. a manually programmed system, and a pre-programmed system using punched cards which gives fully automatic operation.

Holes punched in each recipe card correspond to the weight of each ingredient required. Plugs inserted through each hole into corresponding holes in the program panel interconnect two printed circuit matrices, so selecting the type and weight of ingredient required. Pre-punched cards are supplied for special mixes, and a spare program position enables these to be set up without disturbing normal working.

A request for a mix from an oven operator actuates the programmer which selects the correct recipe for that oven, and initiates the conveyance of each ingredient to a receiver above the mixer. Where more than one oven uses the same mixer, separate panels are provided for each oven. This enables these ovens to be supplied with different recipes. Signals are exclusive to the oven requesting the mix.

Requests for mixes can be answered by the programmer directly. It selects the recipe by scanning the ovens in a semi-random fashion. Alternatively, where requests require handling in a particular order, the main controller can decide which oven will be supplied next. This facility is particularly necessary at the commencement of a day's work when a large number of requests may be received at the same time.

The Programmer

With the pre-programmed system, if more than one mix has been requested at the same time, the programmer scans all the ovens in a predetermined order until it finds the one making a request. Weighing of this mix is completed and dispatched before the hunt for another request is started.

The programmer will omit any request from an oven where the containers already hold ingredients or have their discharge valves open. It will also reject a recipe requiring an ingredient that is not available. The scanner gives preferential treatment to the more important lines of production.

A complete record of the ovens selected and the recipes supplied is given by a teleprinter in an alcove adjacent to the control panel. The recipe is printed with letter prefixes before each weight, denoting the grade and type of each ingredient used. The weights printed are accumulative for

How does tradition make a difference in flour?

For over 75 years Russell-Miller has been an industry leader in making flour. How does this tradition really help you produce better baked goods?

ADVANCES in baking are coming thick and fast. Both retail shop bakers and large wholesale bakers are adopting more efficient methods and machinery to produce tasty, nutritious goods at the lowest possible cost in order to compete with other food producers.

Consequently, you, as a flour buyer and baker, need *exact* flour varieties with consistent, unvarying analysis, time after time. Uniformity is an increasingly important ingredient in bakeshop procedure and in flour requirements.

Russell-Miller's more than 75 years of top milling experience means we have acquired the skill to give you such flour. Our mills are strategically located in the best wheat growing areas—in the Northwest, the Central States, the East and the Southwest. Here we select and store in the great elevator capacity available to us, the choicest wheats. Thus, we have a ready-at-hand supply of just the right wheats for milling the quality flours you need to produce the top-notch baked goods your customers demand.

Over seventy-five years of working with the baking industry has taught Russell-Miller to understand your needs and interests. And, just as important, these years have helped Russell-Miller grow into a milling concern of a size and capacity that allows us to really *do* something about our desire to serve you well.

We maintain the latest machinery and methods known to milling. The quality of every sack of Russell-Miller Flour is rigidly controlled. That's why bakers usually rely on Russell-Miller Flours when they bake experimentally to set standards for their line. The majority of the premium breads on the market today were developed with and continue to be baked from Russell-Miller Flours.

We send specialists every year into the heart of the wheat growing areas in advance of the harvest to collect wheat samples which are experimentally milled. Result? We know exactly which wheat to buy for the exact type and quality of flour you need.

Just as you judge your friends on the basis of honesty, sincerity, genuine interest in you and their desire to do good—so you should judge and choose your flour miller.

For more than 75 years Russell-Miller has had a tradition of interest in you and the future of your industry. Here's just one example. Russell-Miller gives technical and, in some cases, financial support to private and governmental wheat improvement groups throughout the country. This we do in an effort to see that the best possible wheat is grown to supply the baking industry with the best possible flour.

In short, for more than three quarters of a century Russell-Miller has looked on its position of leadership as obligation to do everything possible to answer all of your needs with the best flour. *That's* where tradition makes a difference in the flour you buy.

RUSSELL-MILLER Milling Co.

specialists in the milling of fine flours

MINNEAPOLIS 15, MINNESOTA. Millers of Occident, American Beauty, Producer, Powerful and other superb Hard Spring, Hard Winter and Soft Wheat Bakery Flours.

each ingredient. This provides an immediate stock check on total weights.

The control panel is housed in a specially constructed dust free room. Starters and subsidiary control equipment are grouped in a separate compartment at the rear of the panel.

A small desk projection at the center of the panel contains the controls of an intercommunication system, which links the main controller with all the remote control points.

The panel is divided into appropriate sections covering intake to test bins, transfer from test bins to storage bins, batch preparation and batch distribution. It gives a practical diagrammatic layout of the Robinson plant to which the controls have been applied.

Fault Conditions

Any fault on complete equipment will sound one or more alarms, and a visual indication of the type of fault and its location will be displayed on the control panel. Facilities have been built in to enable this fault condition to be "piped" to the maintenance section or telephone operator.

The equipment also has a memory which will enable it to remember where it was previous to a fault, such as mains failure. It will then carry on from its last operation. Under these conditions it would not be necessary to have an operator in the control room all the time.

Calibration of accuracy of the weighing equipment can at any time be checked by the operation of a motorized test weight controlled from the main panel.

Some thirty motors have been installed in the plant, ranging from ¾ h.p. to 25 h.p. All are controlled from the main panel, and sequencing prevents the consequence of human error during starting operations.

Control gear has been specially produced to meet requirements of the circuitry. Six large cabinets at the rear of the control panel house, the motor starters, relays and fuse gear, and provide circuitry protection and facilities for sectional isolation for maintenance purposes.

The flour bins combine the advantages of timber for flour, storage, including high insulation and freedom from condensation, with the sturdiness of a reinforced concrete framework. Steel hoppers are mounted beneath. «

RUST SCARCE

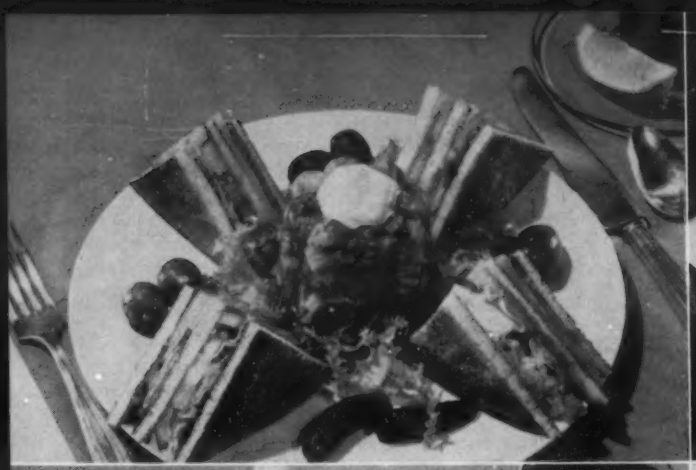
Rust is scarce in western Canada. While spore showers occurred over southern Manitoba in late June, there is no evidence of infection. «

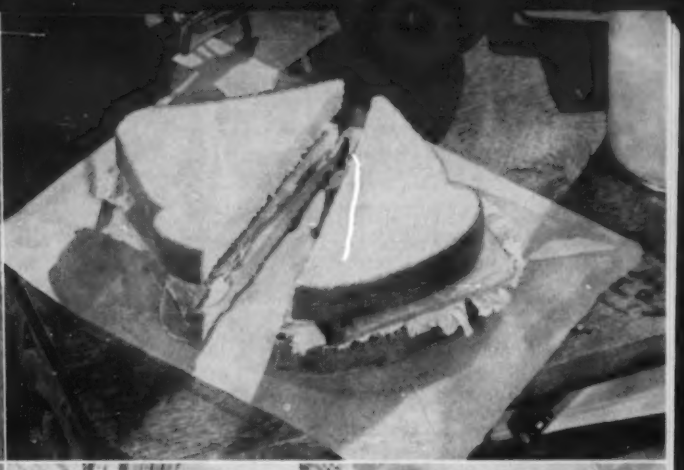
Canadian Exports of Wheat Flour

(Figures in Sacks of 100 lb.)

	1959-60		1958-59*	
Commonwealth countries	May	10 Mos.	May	10 Mos.
U. K.	619,007	5,149,299	514,806	5,078,862
Africa—				
British East Africa	.....	1,818	.....	100
Federation of Rhodesia & Nyasaland	830	9,279	860	7,387
Gambia	1,050	4,916	660	5,508
Ghana	72,864	618,339	130,947	481,427
Nigeria	21,262	189,635	15,655	57,490
Sierra Leone	12,492	122,142	16,991	96,631
Asia—				
Aden	560	3,370	.....	.....
Ceylon	253,482	614,446	.....	638,329
Hong Kong	30,670	257,305	27,970	220,128
India	.....	.....	.....	850
Kuwait	.....	7,364	.....	.....
Malaya and Singapore	16,903	209,273	19,677	155,312
Other British East Indies	42	532	84	756
Pakistan	75	7,839	150	150
Europe—				
Gibraltar	.....	15,232	3,360	16,016
North America—				
Bahamas	13,563	102,610	7,264	97,688
Barbados	7,707	96,517	10,546	111,707
Bermuda	5,052	41,983	3,035	40,031
British Honduras	228	4,879	292	7,499
Jamaica	55,479	602,404	52,734	615,027
Leeward and Windward Islands	41,541	385,825	41,054	369,823
Trinidad and Tobago	86,079	693,927	81,555	592,469
Oceania—				
Fiji	625	5,395	1,255	5,700
South America—				
British Guiana	1,787	105,330	5,726	68,394
Total, commonwealth countries	1,241,298	9,251,705	934,620	8,667,284
Foreign countries:				
Africa—				
Azores and Madeira	367	5,143	.....	8,767
Belgian Congo	35,478	227,826	35,081	212,314
Egypt	.....	.....	22,153	22,153
Liberia	1,819	8,139	927	4,780
Morocco	.....	.....	.....	963
Portuguese East Africa	.....	1,280	761	1,561
Portuguese West Africa	10,981	40,010	3,300	25,759
Asia—				
Arabia	.....	7,982	.....	20,531
Indonesia	.....	137,524	.....	.....
Iran	63	383	.....	195
Japan	55,456	418,251	75,541	414,064
Jordan	.....	.....	.....	40
Lebanon	2,516	17,155	204,780	214,259
Philippine Islands	164,282	1,806,607	25,666	1,200,823
Portuguese Asia	1,980	61,850	3,540	78,286
Syria	.....	937	.....	1,260
Thailand	10,550	112,977	16,650	119,680
Europe—				
Belgium	9,856	54,306	.....	100,858
Denmark	200	1,872	.....	840
Germany, Federal Republic	.....	280	.....	.....
Greece	550	1,982	.....	2,052
Iceland	1,362	4,834	.....	5,043
Italy	.....	.....	784	878
Netherlands	.....	1,085	.....	2,420
Portugal	.....	6,886	450	21,740
Sweden	.....	440	.....	440
North America—				
American Virgin Islands	.....	.....	.....	150
Costa Rica	21,380	261,900	22,925	179,762
Cuba	10,100	47,872	12,620	98,928
Dominican Republic	2,500	94,125	35,804	257,986
El Salvador	8,587	126,107	12,145	141,507
French West Indies	.....	1,300	400	3,030
Guatemala	726	38,031	4,978	101,289
Haiti	.....	720	100	20,790
Honduras	2,210	20,604	1,720	26,562
Netherlands Antilles	4,540	41,536	6,796	55,823
Nicaragua	9,340	123,089	13,230	115,867
Panama	11,328	108,550	8,012	104,525
St. Pierre and Miquelon	.....	6,919	650	7,525
U. S.	58,543	545,140	85,131	622,061
Oceania—				
French Oceania	.....	81	99	339
U. S. Oceania (Guam, etc.)	1,000	†3,000	.....	525
South America—				
Bolivia	100	100	.....	.....
Chile	.....	700	.....	2,700
Colombia	251	1,403	.....	109,062
Peru	.....	2,050	301	9,451
Surinam	2,591	27,600	4,972	34,621
Venezuela	30	1,645	120	281,877
Total, foreign countries	428,686	4,370,421	599,636	4,634,086
Total, all countries	1,669,984	13,622,126	1,534,256	13,301,370

*Revised. Compiled by Ontario Flour Millers Assn.
†Revised, Okinawa 1,000 cwt. in April, 1960, should have been reported U.S. Oceania.





360 Billion Sandwiches

Each year the bread-eating people of the U.S. consume 360 billion sandwiches. To keep this consumption ever before the public and industries most vitally involved, the National Restaurant Assn. and Wheat Flour Institute promote August as National Sandwich Month. These organizations have climaxed their 5th annual contest to choose the year's best sandwiches. From these they have had judges select the three top sandwiches. To see the 1960 top winners and their sandwiches, please turn this page. →

Meet the Top Winners in 1960's National Sandwich Idea Contest

A novel approach to roast beef on rye, the "Atlasta Good Beef Sandwich," has elevated its originator, Mrs. Helen Millward of Fallon, Nev., to prominence as 1960's Sandwich Queen. Her sandwich combines thinly-sliced roast beef dredged in sour cream and layered on rye bread.

For her success, Mrs. Millward wins a gourmet's tour-for-two of Europe, all expenses paid for two weeks, and a cash award of $500. She was feted in New York City and crowned Sandwich Queen during a luncheon at the Park Lane Hotel.

The second prize sandwich selected from the 20 best of the year is an American creation by a French chef de cuisine, "Theodore's Sandwich," made by Theodore Poumirou of the El Prado, Hotel Plaza, San Francisco. For his successful sandwich Chef Poumirou wins $1,000. He, too, was brought to New York for the queen's coronation luncheon.

The French-born Mr. Poumirou has been serving San Francisco restaurant patrons' palates for more than 35 years. "Theodore's Sandwich" is a turkey-ham combination topped with a gourmet cream sauce flavored with sherry wine, fresh mushrooms and Parmesan cheese.

Chef John Paul Goede, Mader's German Restaurant, Milwaukee, walked away with third prize for his "Creamy Nutty Tuna" sandwich. He receives $500 in cash and with the others was brought to New York for the coronation luncheon.

Chef Goede's winning sandwich is a tasty blending of enriched white bread, whole wheat bread, cream cheese, pecan tidbits, mayonnaise, ripe olives, flaked tuna, sweet pickle sticks and potato chips.

Contest Sponsorship

Sponsored in the food service industry by the Wheat Flour Institute and the National Restaurant Assn., the fifth annual National Sandwich Idea Contest picked its 20 top sandwiches some time ago—from 800 entries—in Chicago.

From there it was a matter of turning loose judges to select the three ultra-best ones, no small task because of the tasty array of delicacies provided.

Then the 20 top sandwiches were announced, but final selection of the best three was kept carefully under wraps until plans were firmly established for the coronation luncheon in New York.

The three winners were flown to New York for the ceremony. Nearly 200 food industry leaders and executives, plus nationally prominent food editors and writers, witnessed formal coronation of the queen and her court. The appetite-whetting winning sandwiches were served on the luncheon menu with a chilled soup appetizer,

Mrs. Helen Millward
Sandwich Queen

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CARGILL EXTENDING THE REACH OF THE AMERICAN FARMER

Chef Poumirou
2nd Place Winner

courtesy of Campbell Soup Co.

The grand champion recipe combines sliced roast beef, sour cream, horse radish and dry onion soup mix on rye bread. It's title has a double derivative, first, as the namesake of Mrs. Millward's mother's ranch—the Atlasta Ranch—and second, because she felt the world was moving too slowly for want of "At last, a good beef sandwich!"

Queen's Occupation

The "Queen," her husband, Bill, and her mother own and operate a medium-sized fast food operation Spudnut Shop restaurant in Fallon. Her mother opened the food shop on her ranch property several years ago. The Millwards joined her there in 1952.

'Theodore's Sandwich'

Chef Poumirou, in putting together his sandwich that took second place, was faithful to his French birth and culinary training. In addition to preparing elegant dishes for San Francisco diners for 35 years—the last 12 at the El Prado—he also has served the palates of gourmets at the St. Francis Hotel, the Pacific Union Club, the Sir Francis Drake Hotel and the Family Club.

The third place winner, Chef Goede, first prepared his cream cheese-tuna fish pecan innovation at a Milwaukee celebration observing opening of the St. Lawrence Seaway in 1959. It was served at a party honoring the Icelandic consul. The sandwich pleased so many palates he decided to enter it in the contest.

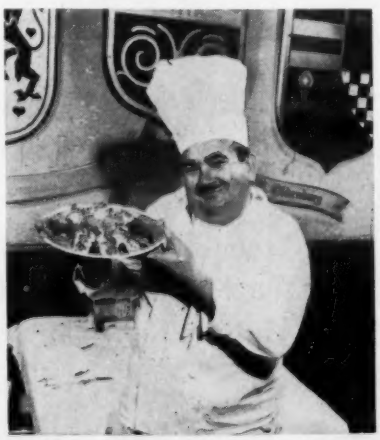
A battery of judging panels this year narrowed the field of nearly 800 recipe entries to the one-two-three winners circle. All entries were turned over to Lawrence B. Wong, director of the restaurant placement bureau at the City College of San Francisco. With assistance from Chef Pierre M. Coste, and curriculum students, he faced the monumental task of sifting out the 20 best recipes.

Interim Judging

Mr. Wong sent the 20 choices to an interim judging panel of members on the NRA food committee. Chairman Beatrice Hughes of Harding's Restaurant, Chicago, cut the 20 down to the "10 Best Sandwiches of the Year."

Then the final judging panel of leading food editors and restaurateurs met at Schrafft's kitchens in New York to test and taste for the grand champion and runners-up.

On that panel were: Frank Birdsall, Innkeeper, Treadway Inns, Rochester, N.Y.; Miss Jessie Alice Cline, Parkway "723" Restaurant, Chicago; Miss Eleanor Crook, food editor, American Weekly; Martin J. Horn, Jr., vice president, Mayfair Farms, West Orange, N.J.; Mrs. Eleanor Kent, food editor, Modern Romances; Miss Dorothy B. Marsh, food editor, Good Housekeeping, and Mrs. Glenna McGinnis, food editor, Woman's Day. «



Chef Goede
3rd Place Winner

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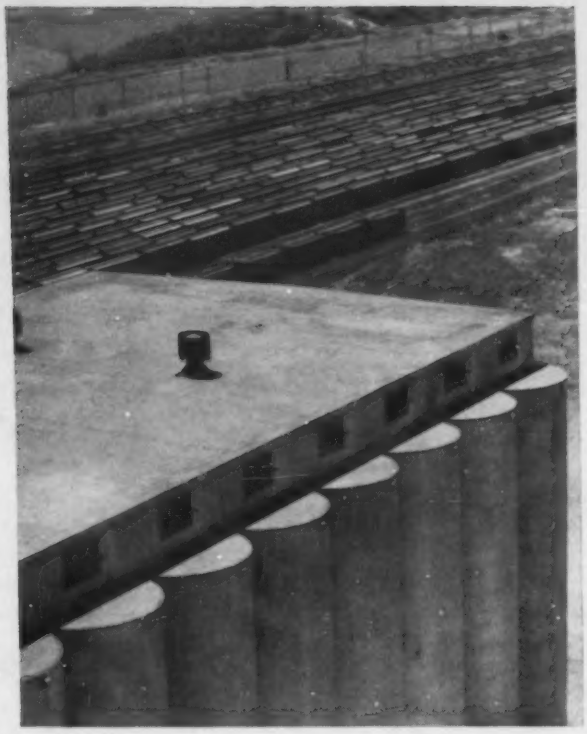


Contamination in transit and terminal storage is a double-barrelled threat to the miller and the elevator operator. Even the baker at the end of the line becomes provoked with the situation at times. Finding a solution is like trying to decide whether the chicken or the egg came first. It's difficult to determine where the trouble begins. One factor looms larger all the time, however—regulatory action including that of the Food and Drug Administration, is becoming more of a reality. Mr. McSpadden is with the Commander Larabee Milling Co. His paper is published in conjunction with the American Association of Cereal Chemists.

Contamination in Transit

When It Happens, Everybody Is Angry

By PAUL S. McSPADDEN

The miller can be a two-time loser in this matter of contamination in transit and terminal storage. If he is located in an area where considerable grain storage exists, railroads serving him are very kind about furnishing his daily needs for cars from their supply of grain empties.

Too often, however, no attempt is made by the railroad to clean out these cars. They arrive at the mill siding containing paper, grain doors, residual grain and other assorted debris.

If he wishes, the miller can reject any or all of these cars, though they probably have an "A" card on the door denoting suitability as carriers for flour or other cereal products.

This card was placed there in all probability by an inspector from the railroad who stood flatfooted on the ground and peered into the car's interior. His inspection was sufficient to note that the car had a floor, two sides, two ends, a ceiling, and possibly two doors. Of the latter, it is not always a certainty.

Should the miller feel that the condition of any of these cars justifies refusal, he will need to make some hurried changes in his scheduling, because all too frequently these cars were switched to him just under the gun. Normally, by throwing extra help into the coopering crew, it is possible to do a hurry-up job on the car before the lading begins to pour in.

If he wishes to reject any or all of the day's set, he may be told no other cars are available that day, and this calls for a shutdown of the plant. Those who have experienced delayed shipments to bakers, working on tight schedules of flour inventories, know this can cause a slight disturbance in shop routine. The baker may become a bit provoked, too.

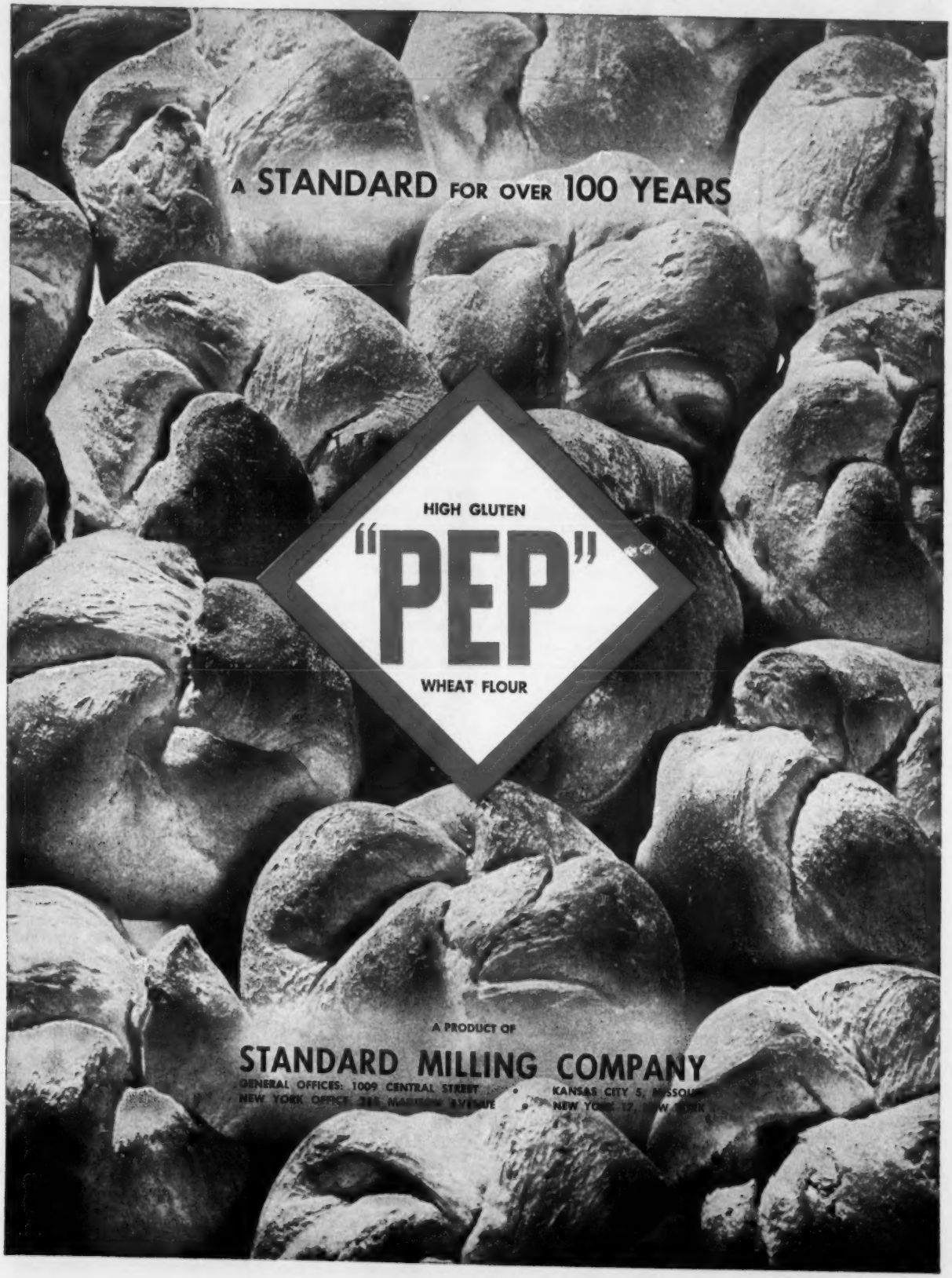
The miller will do all in his power to avoid using cars which he feels are questionable. But often, to avoid shutdowns and delays, he will find it necessary to use whatever the railroad sets in for him. He will do what he can in the limited time allowed to clean and upgrade the car.

Should he complain to the railroad, its representatives will promise to come over and see what can be done to improve the situation. Quite conveniently, they fail to show up until such time as a reasonably satisfactory set of cars is made. They look the cars over with the miller, and indicate to him that after much work they have solved the problem. Such solution may last a few days, followed by another staging of the same old play. After so long, the miller becomes somewhat hardened, and takes a "what's the use" attitude. For this you can hardly blame him.

The modern boxcar, including anything built since 1920, is so constructed that it may become an ideal incubator for insects and/or rodents after one lading. Dead space pockets in the ends, sidewalls and ceilings, can—and do—collect grains and bulk cereal products in boxcars, which may be infested or later become so, subsequently infesting every lading hauled in that particular car.

Recently a railroad car builder, when asked concerning the use of fiberglas insulation in these areas of a boxcar, gave the classic answer:

This railroad installed some cars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Headaches in Transit (continued)

with fiberglas. But when its people decided to check effectiveness, the car linings were opened. When unable to find any insects in the fiberglas, their decision was that the fiberglas was no good!

For those who do not know about this application of fiberglas, it is compacted into these dead spaces to exclude insects and rodents. So, since it was doing the job for which it was intended, this railroad had found it no good, and discontinued its use.

Boxcar Repairs

Of further interest, when repairs are made on boxcars it is not customary practice to remove that material which may be lodged back of the wooden linings, even when the repair work may pertain to that area. Old boards are replaced with new ones—right over the buildup of debris.

Our files are full of examples of contamination in transit, of which I would like to discuss two. One has to do with a car loaded with bakery flour, which arrived at the consignee's bakery defiled by mice. The baker rejected this car to the railroad as unfit.

The railroad asked the shipping mill to handle the car for the railroad. Such was agreed, with the understanding that the car would be fumigated before it was started back to the originating plant.

Upon arrival at the mill, an examination of the car showed much damage, evidence of quite recent working, and no evidence of fumigation. Also revealed on the wall of the car was a loading plan by a competing mill, with a recent date. A check with this mill showed that it also had shipped this car interplant, and upon arrival, found that mice had defiled the load.

There was a railroad inspection, a claim was made, and the day following this same empty car was set at the mill siding with an "A" card, suitable for flour loading.

The second example has to do with an interstate shipment of family flour seized at its destination by the Food and Drug Administration, due to insect infestation. This car of flour had been shipped from a clean mill, recently fumigated. But examination on arrival showed insects present on the bags and even inside some of the bags.

Car Fumigated

This car was fumigated and returned to the shipping mill, to be salvaged at the railroad's expense and under the supervision of FDA. Every bag was individually sifted, and the wooden linings partially removed from the car.

Some infestation was found inside the bags as they were sifted. However, from approximately 100 lb. of material removed from behind the wooden end lining of the car, 160,000 flour beetle, flat grain beetle and saw-toothed grain beetle were recovered. Under one section of the plywood ceiling, 48 flour beetle, dead flies, dead fly maggots and dead pupae were recovered.

It is quite likely that FDA will cite the railroad in this case. Should such happen, it could be the spark necessary to jar the railroads out of their complacency on this matter.

If infestation in transit is a double-barrelled threat to the miller, it is also the same threat to the terminal elevator operator. He receives his grain for storage by boxcar, ship or truck, any one of which can be a potential infestation carrier.

If he does take good care of his grain while it is in his possession—and many terminal operators do—he can still get the second barrel. When he ships his grain out, no matter how well it has been cared for, he runs into the same liability by using a common carrier.

'Keep It Clean'

To say this is the only source of infestation at the terminal elevator level would be most unfair. It has been somewhat of a problem to convince the average elevator operator the grain he is handling is food, and that he must keep it clean. It is hard to dispel from his mind that it is not just another agricultural commodity he is storing. FDA activity over the past several years is beginning to get through to many of them.

Elevators are handling a dusty material, and control of such dust is poor to fair. Workmen in an elevator have come to live with dusty conditions throughout the years, accepting this as inevitable. They have learned to take dirt, along with sloppiness and poor housekeeping, as their way of life. To them insects were only a serious matter if they caused heating or enough damage to become apparent during a cursory examination. Stress was made that rodent contamination meant primarily rats. So little thought was given to mouse control.

With regulatory action becoming more a reality than merely a threat, many of these same elevators have embarked on programs of rodent proofing — including mice — on their premises, as well as trapping and poisoning programs. Where birds were a problem, windows and doors have been screened. Much stricter controls are placed on sampling of inbound grain. Should infestation be detected, control steps are taken immediately. Inside and outside housekeeping has improved, and many of the harborages of insects, rodents and birds have been removed.

Schedules have been established for regular cleaning and spot fumigation of equipment such as boots, conveyors, dead boxes and pits. Residual insecticides are being used in areas where they will do some good. Weed control programs have been established and rubbish and waste grain dumping areas are being controlled.

The presence of large quantities of government-owned and stored grains no doubt is responsible for much of the contamination present when the grain arrives for processing. Some responsibility for this must not be charged to the terminal operator, as it occurs before he obtains possession.

Progress Made

Much progress has been made by many terminals; much remains to be done by many. Certainly it behooves the stragglers to get busy before the heavy hand of the law forces them to it. «

Legality of Oregon's Commodity Act Studied

The question has been posed by agricultural observers as to whether or not Oregon's Commodity Commission Enabling Act is constitutional, and the state's department of agriculture is going to try and find the answer.

The agriculture department is making a careful study of the opinion of Judge George H. Freeze, the Superior Court of Washington, which held the Washington agricultural enabling act to be unconstitutional.

The litigation concerned action against the Washington State Wheat Commission and will be appealed to the Washington Supreme Court, it has been reported.

Some of the language in the Washington act parallels that of Oregon's enabling act. The Oregon agriculture department recently alerted the legislative interim committee studying agricultural marketing agencies in Oregon to the lower court's opinion in Washington and the probability of appeal. «

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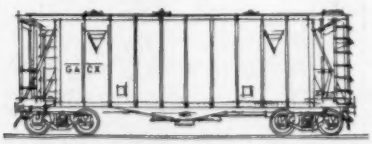

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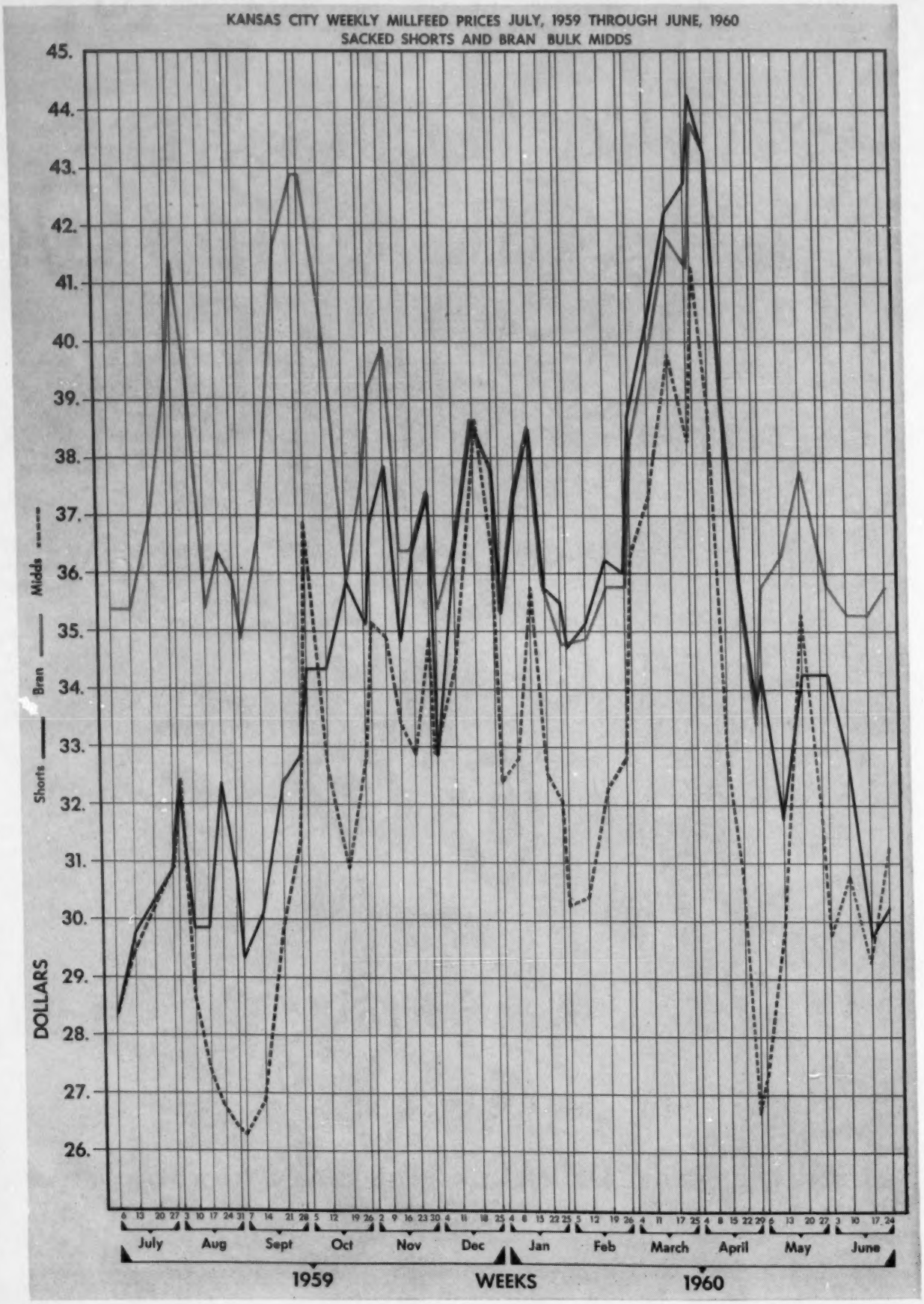
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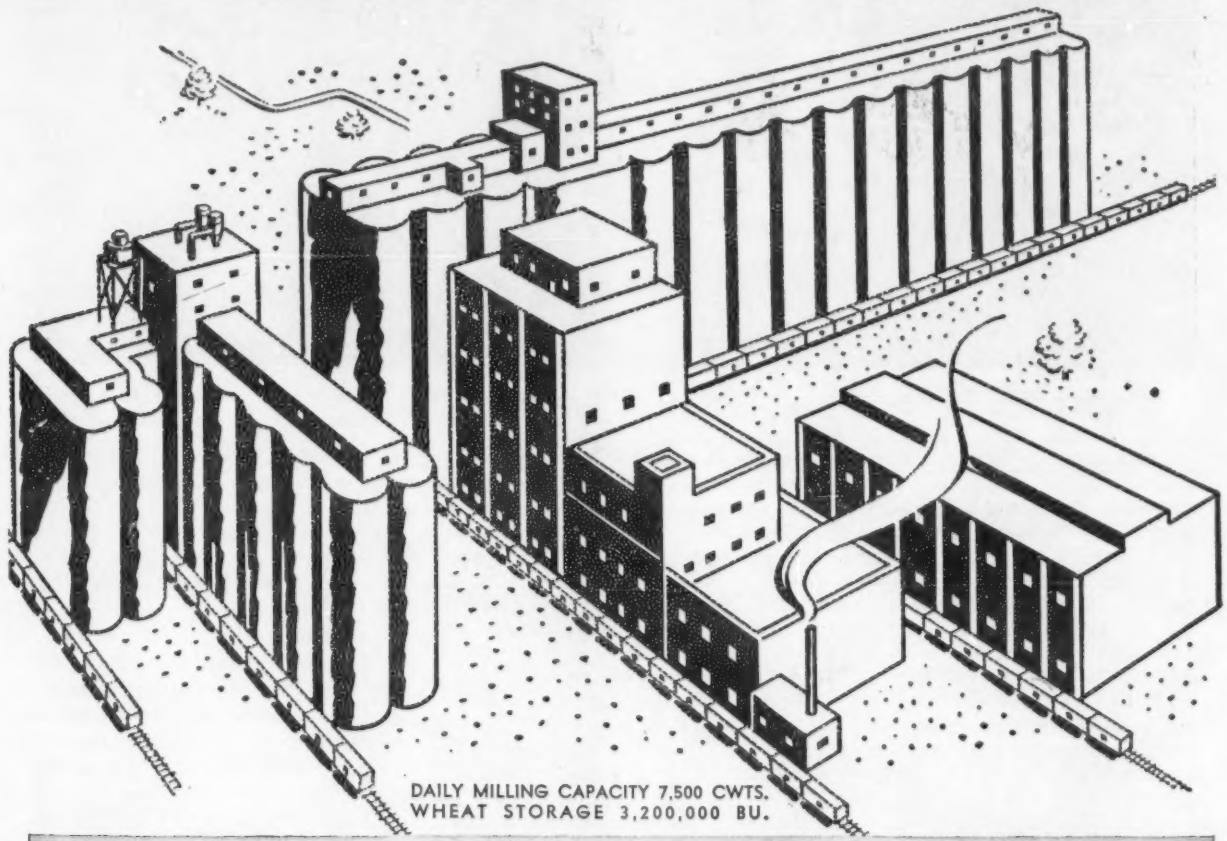

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A Commercial Baking Feature

Air Conditioning Can Be A Productive Bakery Function

By PETER W. SHERWOOD

The last decade has seen extensive adoption of air conditioning in various parts of modern bakeries. A recent survey indicates, however, that some of these plants are air conditioned beyond the economic optimum. An even greater number do not make full use of the potential of temperature and humidity control to improve both productivity and product quality.

The main problem apparently is one of inadequate technical communication between the two industries involved—baking and air conditioning.

In all areas where air conditioning is indicated for baking use, a key design concept is the required "Equilibrium Humidity" (EH). This is defined as the relative humidity of the air at which the vapor pressure of the product is in equilibrium with the partial vapor pressure in the atmosphere. The practical import of this condition is that the product neither loses nor gains moisture in an atmosphere at its equilibrium humidity.

The EH of a product is normally determined by static tests in which a fairly large mass of the product is kept in contact with a relatively small amount of air in an enclosed space at constant temperature. This test may be speeded up in various ways, e.g., by recirculating the air of contact. In any event, after equilibrium has been reached, the dew point—or relative humidity—of the enclosed air is measured, and this is the equilibrium humidity of the product under test, at the temperature of measurement. (Actually, it is only a first approximation but, if the mass of the product is sufficiently greater than the mass of the air, this once-through determination is adequate for the purposes of establishing EH at various stages of the baking process.)

A complicating factor is observed with substances rich in starches or proteins. These materials exhibit differences in EH at a given water concentration, depending on whether the product's moisture content is being raised or lowered. In determining the EH of bakery products for the purpose of establishing air conditioning data, it is necessary therefore to approach the moisture content of the material from the direction in which it will be approached during the baking cycle.

EH Factor Varies

The EH of bakery products varies over very wide limits, depending on the purpose to be achieved, the moisture content to be retained, and the temperature of operation. For example, wafers with a moisture content of less than 1% are in equilibrium with air containing less than 5% wa-

There are some areas of bread baking where air conditioning can serve as a productive function. Its use requires an understanding of the temperature and humidity control aspects of air conditioning, as they apply to the bread baking process. The ancillary aspects of controlling air motion, bacteria and odors require specialized consideration at individual plant sites and should be considered after the decision has been made to install climatic control. Mr. Sherwood is a chemical engineer and a graduate of Columbia University with 20 years' experience in the chemical process industries. He is a member of the American Chemical Society.

ter, while bread, with a typical moisture content of 40%, requires a relative humidity of 95% for unchanging water concentration.

This aspect has very serious consequences in terms of tendency to product spoilage by biological action. In general, it is found that onset of microbiological activity in bakery products is almost completely inhibited at equilibrium humidity below 75%. Accordingly, moisture-proof wrappers are quite suitable for bakery products which have an equilibrium humidity below 75% but materials of higher EH must be enclosed in wrappers which, by virtue of permeability and closure, permit passage of water vapor. These latter products, then, are also the type for which storage at controlled humidity and temperature conditions is indicated. Finished bread falls clearly into this category.

At the opposite extreme is the practice of injecting low-pressure, saturated steam into the feed end of the baking oven to achieve glazing of the pan loaf's top crust. In an important paper on the subject, E. A. Farrand points out that such steam injection causes selective condensation on the dough surface and that 2 to 3 min. of such condensation is usually enough to achieve the desired glaze. Furthermore, Mr. Farrand points out that such steam injection increases rate of heat penetration into the dough and thus effects a slight reduction in baking time.

Going through the manufacturing process for bread, i.e., a product of high equilibrium humidity, we find instances at almost every step where control of either temperature or relative humidity may have crucial influence on production rate, extent of spoilage, or product quality. Taken stage by stage, the following picture emerges:

INGREDIENT STORAGE: Refrigeration is required for quality retention in eggs. In bread making this cooling requirement applies, therefore, only to specialty products.

In flour storage, outstanding importance attaches to control of relative humidity, which should be about 60%, to prevent a change from the optimum moisture content of this ingredient. Best storage temperature is reported to be in the range of 60-70° F., and may vary within these limits.

MIXING: Refrigeration must be provided to remove heat introduced by the ingredients themselves, by the heat of flour hydration and by the mechanical heat of mixing.

In general, the cooling requirements of the mixing operation may be provided adequately by circulating cooled water through the mixing machine.

FERMENTATION AND RETARD ROOMS: Careful temperature control is called for at these two stages. In fermentation, at 78-82° F. and 70-75% relative humidity, air conditioning is called for, especially during the summer months.

A number of bakeries prefer to operate their fermentation stage at relative humidities in excess of 90% to protect the dough against drying out. At such high humidity, air conditioning presents a difficult problem due to occurrence of condensation, which is accompanied by corrosion problems. Where external temperature conditions permit, it is therefore simpler to provide the necessary high humidity not by air conditioning but by use of unventilated rooms, or of covered dough containers.

The fermentation step, which normally lasts between 2 and 4 hr., is followed by storage of the dough in the retard room, where it is held until it can be fed to the dividing operation. To prevent rising of the dough at the retard stage, this area is normally refrigerated to about 34° F. using, however, minimum air circulation.

DIVIDING AND MOLDING: These are relatively insensitive to temperature variations and air conditioning for control of this variable is not called for. However, relative humidity must be controlled. If humidity is too low, excessive drying may occur, while high humidity can cause stickiness in the dough, which can create difficulty in the molding machine (but which can generally be overcome by dusting flour). Value of air conditioning in this area is therefore marginal, at best.

COOLING: Following the baking step is the next stage where air conditioning can often be justified. The rate of cooling the loaf has significant effect on the appearance of the product, on its weight, and on the ease with which it can be sliced by the machinery customarily employed in bakery practice. Cooling must not be so fast that cracking of the crust will occur. On the other hand, properly controlled air conditioning can reduce cooling time by as much as 50% below the

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STORAGE OF FINISHED BREAD: Here bread should be exposed to minimum temperature fluctuations. The adverse effect on firmness, flavor, and moisture distribution is greater than is observed when the bread is stored at a constant temperature which equals the average of the fluctuation range. In general, low temperatures (32-55° F.) are to be avoided because they lead to increased staling. Higher temperatures (65-90° F.) have the disadvantage that microbiological activity is increased.

The effect of relative humidity on finished bread has already been discussed. Using permeable wrappers, R.H. should be at least 95%. Air conditioning may be needed for temperature control in hot climates, but generally storage rooms are simply designed for high humidity, minimum ventilation.

More recently, commercial interest has been aroused in bread freezing for storage—especially as applied to specialty quality breads. «

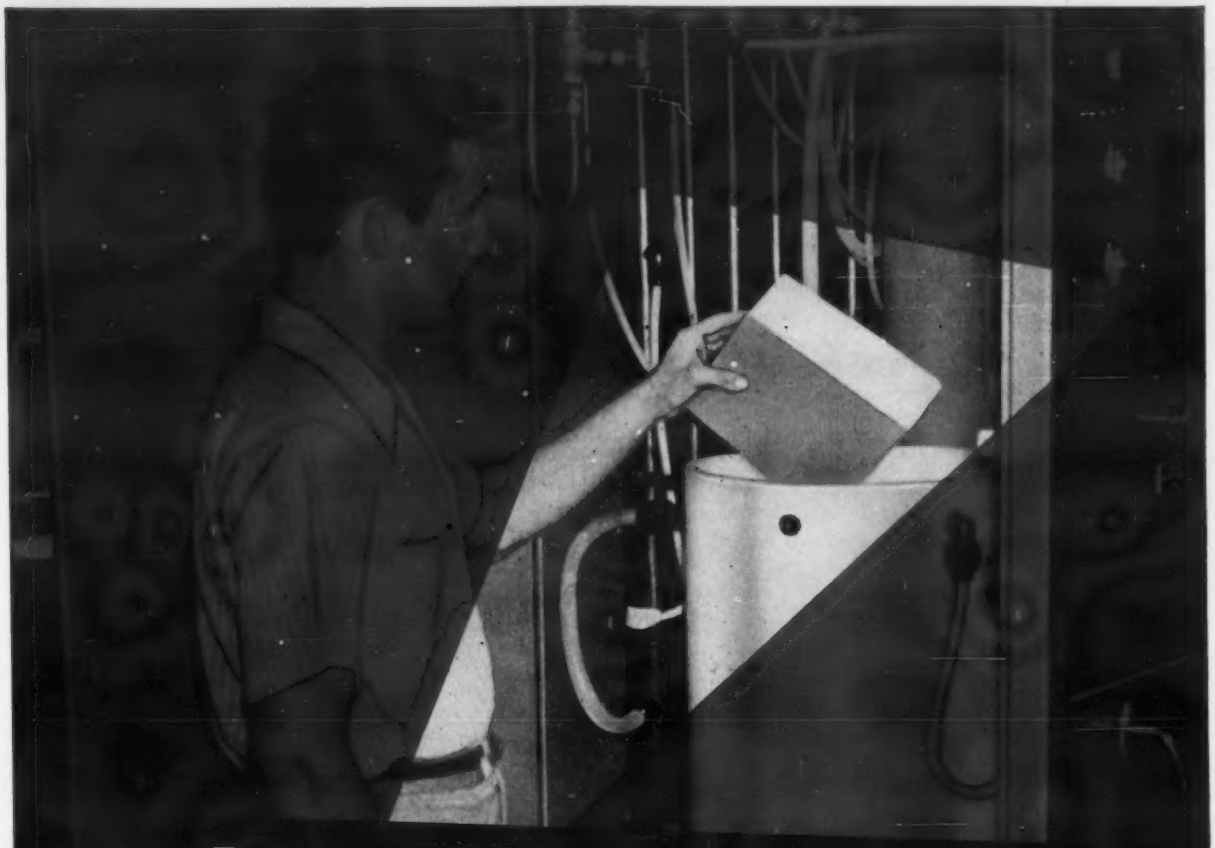
U.S. Exports of Wheat Flour

May, 1960, and Cumulative*

Country or area	May cwt.	July-May cwt.	Country or area	May cwt.	July-May cwt.
Canada	6,340	46,931	Jordan	25,343	140,954
Mexico	2,251	4,689	Kuwait	7,516	189,166
Guatemala	2,408	58,635	Saudi Arabia	124,360	1,198,961
Br. Honduras	13,250	103,624	Arabian Penin. Sts.	1,052	42,299
El Salvador	40,827	315,150	Bahrein	15,576	111,922
Honduras	20,719	156,522	India	16,850	49,370
Nicaragua	20,468	162,562	Pakistan	.....	98,204
Costa Rica	26,583	365,599	Ceylon	.....	897,606
Panama Republic	34,695	310,034	Thailand	3,202	20,703
Canal Zone	.....	4,325	Vietnam	14,975	614,690
Bermuda	32	404	Laos	1,763	8,283
Bahamas	32	455	Cambodia	17,989	64,845
Cuba	112,831	1,113,120	Malaya	740	6,256
Jamaica	36,909	339,168	Aden	.....	100
Haiti	.....	290	Burma	.....	56
Dominican Republic	2,054	314,045	Singapore	1,400	9,487
Leeward and Windward Islands	3,000	21,826	Indonesia	224,100	1,853,375
Barbados	8,922	73,892	Philippines	73,550	1,666,989
Trinidad and Tobago	58,040	339,485	Macao	.....	440
Neth. Antilles	14,850	169,386	Portuguese Asia	.....	500
Colombia	43,824	231,026	Korea	25,156	301,339
Venezuela	6,238	141,106	Hong Kong	7,469	97,709
British Guiana	32,179	391,928	Japan	129,474	1,138,069
Surinam	8,783	123,335	Nansei & Nanpo Is.	4,376	37,697
Ecuador	357	357	Trust Terr. of Pac. Is.	886	17,130
Peru	9,061	77,897	New Zealand	100	100
Bolivia	106,026	767,625	French Pacific Is.	20	20
Chile	5,890	85,551	Tunisia	.....	2,625
Brazil	449	1,699	Libya	.....	28
Uruguay	.....	4,432	Egypt	190,263	6,669,309
Argentina	.....	158	Canary Islands	.....	1,557
Iceland	16,331	137,760	Cameroons	450	1,140
Sweden	.....	18,337	Spanish Africa	554	554
Norway	38,789	189,049	Fr. West Africa	.....	67,339
Denmark	.....	428	Ghana	48,281	387,638
U. K.	47,995	332,564	Nigeria	135,481	967,033
Ireland	.....	560	Br. West Africa	13,020	77,583
Netherlands	152,275	1,491,591	Madeira Islands	5,854	24,822
Belgium & Luxembourg	1,175	7,847	Angola	2,999	19,810
France	.....	1,026	West Port. Africa	2,338	9,056
West Germany	800	5,413	Liberia	5,783	32,948
Austria	.....	5,571	Belgian Congo	25,962	400,549
Portugal	150	33,225	French Somaliland	.....	15,754
Italy	.....	618,552	Ethiopia	.....	2,954
Greece	.....	529	Seychelles & Dep.	.....	1,005
Spain	.....	594	British East Africa	526	7,355
Turkey	.....	239	Mozambique	.....	560
Lebanon	143,688	1,118,357	Rhodesia & Nyasaland	.....	860
Iraq	.....	10,096	Others	.....	66,290
Iran	518	6,612			
Israel	2,774	38,143	Totals	2,148,921	27,054,788

*Cumulative—July, 1959-May, 1960.

Compiled by the Export Department, Millers National Federation, from official U.S. sources



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U.S. Pat. Nos. 2,683,651—2,740,690—2,837,414

Central America Expands Its Milling Industry

The milling of wheat into flour and the use of the end product in edible form is one of the oldest technological sciences known to man. And the centralization of production in the towns and villages of Europe was a natural development as man came to know the value of wind and water power. In due course of time, that centralization spread to North America.

But in some areas of the world, the mass production of flour is of fairly recent origin, comparatively speaking. Such an area is represented by a complex of three countries in Central America—Guatemala, El Salvador and Honduras.

Many mills were built in the decade from 1925 to 1935, but during the next 20 years they jogged along, unable to meet the twin obstacles of heavy competition from imported flour and the need to use inferior locally-grown wheat. Then the millers began to see the opportunity looming ahead as their governments encouraged local industrialists to improve their facilities. They had the capital, and in some cases association with U.S. millers has given them the technical know-how and the merchandising ability to serve the markets hitherto seen as almost impregnable. And the American millers were not slow to see the opportunities of association as their export markets were threatened.

The same story is true elsewhere—in South America, in Africa—and the theory is that "if the export business won't come to us, we must go to the export business."

Primitive Short System Mills

These mills built 25 to 35 years ago were on the primitive short system, usually the two break, two reduction Midget Marvel. But there were some on a moderately long system with small sized standard machinery. Much of this equipment was purchased second hand from the U.S. at the time when so many small mills were shutting down in line with the process of attrition which marks the development of an industry.

In Guatemala there are about 15 of these small mills operating on local wheat. Out of this group, only one has developed into a modern mill with reasonable capacity.

It is Molino Elvira in Huehuetenango, owned and operated by Don Francisco Ovalle and his three sons. The mill has grown over the years and machines of many makes have been added.

The first two breaks are on a new 10 x 60 in. MIAG roll, with the third and fourth breaks on older MIAG rolls. The fifth break is on an even older 9 x 24 Allis roll stand. Most of the reduction rolls, however, are new style — manufactured by Thomas Robinson & Son, Ltd., of England—but one old German porcelain roll is still in use.

Upstairs, the breaks are bolted on the latest model MIAG drawer type sifter, while the reductions are handled on old Italian machines. There are three new purifiers, one MIAG, one Buhler Bros., of Switzerland, and one Robinson.

Development is not stopping here. Don Francisco says plans are already in the works for a modern cleaning and tempering house.

Two New Modern Mills

There are two completely modern mills in Guatemala. Both are pneumatic and equipped with machinery supplied by Ocrim of Italy. And both were built with local capital. One, in Guatemala City, is operated under an agreement with General Mills, Inc., and the other under an agreement with the Pillsbury Co.

Guatemala is a grain producing country. Its principal crop is corn which is grown on every area with less than a 45 degree slope in the mountains of western Guatemala. Corn has been the staple food of the highlands since the beginning of the Mayan period. Most of these fields have been cropped for over 1,000 years, principally to corn.

As long ago as 1955 the Guatemalan government announced that its policy was to make the country self-sufficient in flour. But there was no financial help forthcoming because it was desired to encourage private investment. And that meant local capital.

The local industry for many years has been protected from imports as far as it could go to meet the demand. But there is still a dependence on overseas sources for the wheat the mills require. And wheat is still the problem.

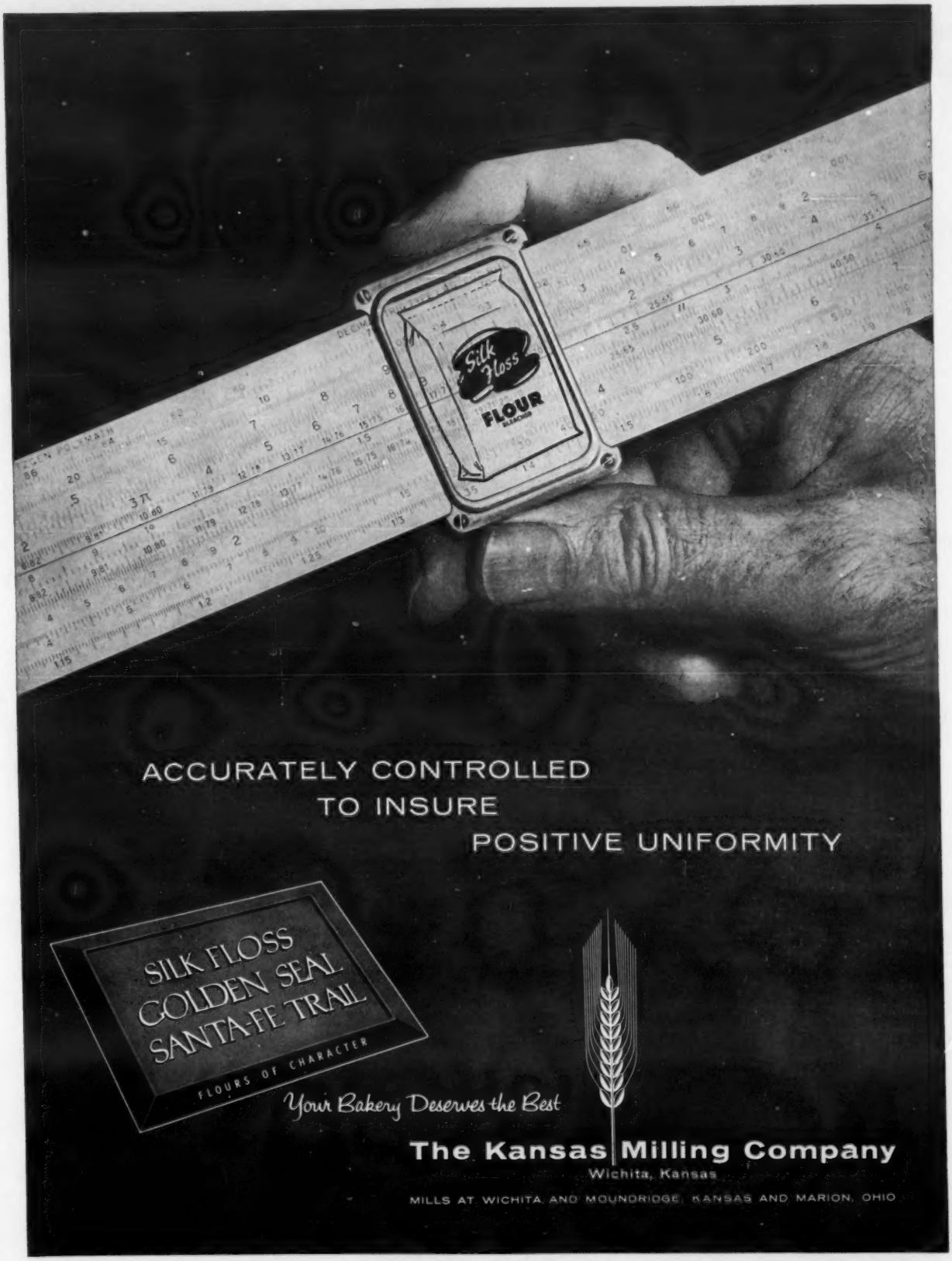
A Canadian government official commented in 1951: "After all, this is not a wheat growing country any more than Canada might be a coffee growing country, and amongst the Central American countries Guatemala is the last to realize this fact."

How, then, has Guatemala made out in its anxiety to grow wheat in the past 10 years? The crop is being grown on the more level lands from 6,000 to 9,000 ft. elevation. This national wheat, as it is called, is of three types—a hard spring, quite low in protein, a yellow hard winter, and a very good soft white wheat. The small local mills are grinding national wheat exclusively while the bigger mills use about 25% national and 75% imported. The Maryknoll Fathers have established missions in Guatemala and are doing the work of the County Agricultural Agents in the U.S. The yields of grain are said to be showing definite increases, and much of this success is due to their efforts. Another pay-off for the work being done is represented by the intention to produce corn for export.

Three in Honduras

There are three long established mills in Honduras. At San Pedro Sula, the firm of Molinero Harinera Sula has a 400-cwt. pneumatic Robinson plant which was built two years ago. This mill replaced an older mill consisting of three two-by-two Midget Marvels and a two-by-four Nordyke.

Milling firms in the U.S. and Canada are developing their interests far beyond the confines of their own countries. From South America to Africa the lines have gone out and the end result brings new areas of interest for companies long established in their own countries. How a thriving industry is being developed in Central America is told in this story, based on information gathered by Dr. Max Markley who has traveled widely in this area, in the Caribbean, in the Philippines, and in Japan in his business of consultant.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Here high protein spring wheat is converted into flour for the large mechanized bakeries of Honduras. Hard winters are ground for family flour.

Also in San Pedro Sula is Molino Hondureno, an old long system mill. In process of building is a pneumatic Ocrim mill with an expected capacity of 600 cwt. When ready, the old plant will be dismantled.

At Tegucigalpa, an old Midget Marvel mill has been replaced by a 300 cwt. pneumatic mill, also of Italian manufacture.

These three plants can provide Honduras with all the flour it needs, the owners claim. And the owners are represented in one single firm because all three firms were recently merged into one company, with Molino Harinera Sula as the base company. This was a logical move since there was interlocking ownership in all three.

These mills are capitalized by Honduran money and they are strongly financed.

Mills in El Salvador

For the past 25 years, W. T. Deininger y Cia has operated a mill on the Hacienda La Laguna, about 10 miles out of San Salvador. It uses three Midget Marvel mills of 300 cwt. capacity. But this plant was to be shut down Aug. 1, with a new 800 sack Buhler pneumatic mill going into operation.

The old mill building will house a modern feed mill and cottonseed expeller plant.

The Deininger family, prominent in the affairs of San El Salvador for many generations, originally came from Germany.

The new flour mill will be operated by Luis C. Giraldo C., formerly of Colombia, and a well known member of the Association of Operative Millers. He attended the St. Louis technical conference last May.

On the other side of San Salvador, local capital is erecting a 1,600 cwt. Buhler pneumatic mill. It is understood that this mill will be operated in association with Pillsbury and operations are expected to begin next October. Between them, the two mills are expected to supply all the flour needed by El Salvador.

There Are Problems

First problem facing these mills lies in the fact that none is located on deep water. The second is that no port is equipped to handle bulk grain. As a result, all grain must be sacked prior to shipment. This makes wheat expensive, because of the higher cost of sacking, and because ocean freight on sacked wheat tends to be higher than on bulk.

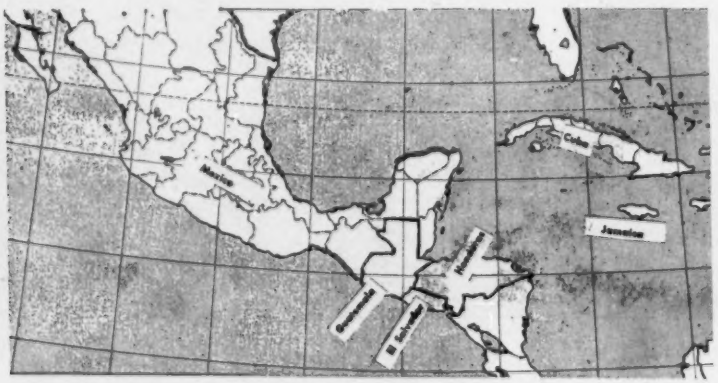
The wheat for the San Pedro Sula mills in Honduras is shipped from New Orleans to Puerto Cortes and thence by rail to the mills. In Guatemala wheat is unloaded either at Puerto Barrios on the Caribbean or at Champerico on the Pacific and moved by rail to Guatemala City and Quezaltenango—or by truck to Huehuetenango which has no railroad. The wheat for mills at Tegucigalpa and for Puerto La Laguna is trucked from the Pacific ports.

The narrow gauge Central American railroad which winds through Guatemala and El Salvador is preparing for eventual bulk movement by ordering 100 boxcars, each of 30 ton capacity.

The Ferrocarril Nacional of Honduras has a few cars which could be coopered for bulk grain. But port installations will have to be built before bulk movement can be established—and plans are being made to do just that.

Truck movement of wheat and flour is on the increase in Central America. Trade barriers between the countries concerned are in process of elimination and soon, it is expected, there will be as little formality in going between country and country as there is in interstate commerce in the U.S.

There have been problems in developing a flour milling industry in Central America. And there are more on the horizon. But observers say they can be solved. «



AIB Short Course

The annual maintenance short course held at the American Institute of Baking in Chicago has been revised to stress fundamentals of efficient preventive maintenance through lectures and intensive workshop sessions when the 1960 course is held Sept. 12-17.

Three speakers, representing bakeries with successful preventive maintenance programs and proven performance records, will discuss mechanics and operational methods used in actual programs. They are: Cy Madely, chief engineer, American Bakeries Co.; H. Edward Hildebrand, Jr., division engineer, and John McDonald, regional engineer, both of Continental Baking Co. «

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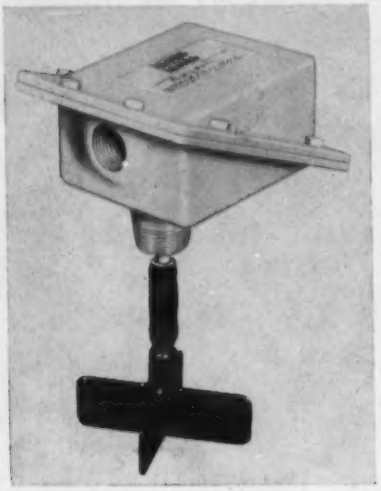
Electronic Control

Flo-Tronics, Inc., has for distribution an electronic, material-level control which, it reports, rules out the element of failure in determining the presence or absence of material at a desired level in a bin, hopper, storage tank or similar container. Called the Model L-400 Flo Level, the device can be used for material level surveil-



lance and control or for quantity measurement in processing and storage containers. It is especially suited for use with powdery or granular products. A rotating paddle in the container controls the generation of a small signal. A transistor circuit increases this signal and operates electrical contacts to control equipment or operate indicators to correct unsafe conditions. If any portion of the instrument fails, the control contacts operate automatically—without electrical actuation—in the same manner as when the material reaches a predetermined level. The unit may be obtained for high-level or low-level "fail-safe" operation, states the manufacturer.

Circle No. 4537
on Reply Form for Details

Bakery Labels

How bakers can increase their sales by the use of labels is illustrated in a four-page, full-color brochure made available by Paramount Paper Products Co. Free copies of the brochure will be forwarded on request. The brochure features for the first time Paramount's pictorial bakery labels and illustrates two other classifications, "Hi-style" and die-cut roll labels. The pictorial labels upgrade bakery packaging by using product pictures to sell related items or to illustrate the product labeled. The hi-style labels are designed to sell more products with personalized copy advertising the bakery and its location. The die-cut roll labels include Paramount's new low cost para-process labels. These are of a standard 1½ in. x 2½ in. size and carry the baker's present design. In each classification, price lists of the labels in varying quantities are offered for the baker's convenience, as well as design numbers, typeset copy and paper stock.

Circle No. 4538
on Reply Form for Details

Rack Escalator

The Crissey Co. has developed a transport rack escalator to eliminate the need for loading docks, hydraulic tail gates, platform lifts, elevators or gravity ramps. Bakers will be interested in the fact that a heavy duty drive mechanism moves various sized racks with loads up to 1,000 lb. each automatically from floor level into transport trucks at speeds instantly variable from three to nine racks a

minute. Safety latches prevent uncontrolled movement of racks during loading or unloading operations. A reversible drive permits easy, safe unloading from trucks to ground level, also at variable speeds. Crissey states that loading or unloading by one man is possible, and that the escalator can be used with dollies, platform trucks and racks. A remote control foot switch provides quick starting or stopping of the unit, leaving the operator's hands free.

Circle No. 4539
on Reply Form for Details

Glassine Bags

Ward Baking Co. recently introduced in the New York, Newark, Chicago and Baltimore marketing areas a single-portion fruit pie available in four different flavors, apple, pineapple, berry and cherry. Called

"Tip Top turnovers," they are individually packaged in transparent Glassine bags flexographically printed in four colors, the color schemes varying to highlight the illustration of the specific fruit in each of the four turnover flavors. Glassine, being highly grease-resistant, prevents shortening in the turnovers from staining the package and, having a dense, hard surface, it is particularly suited for the colorful printing, says the Glassine & Greaseproof Manufacturers Assn. The Glassine bags are printed for Ward by Oneida Paper Products, Inc.

Circle No. 4540
on Reply Form for Details

Trough Grease

Mallet & Co., Inc., has available a non-mineral oil trough grease lubricant to facilitate dough handling in bakeries. Mallet claims that the product is blended of vegetable oils and shortenings, to avoid the Food and Drug Administration requirements which permit only a maximum of 1,500 parts per million of mineral oil to be present in finished bread loaves. The firm offers its trough grease, and

its all-vegetable pan and divider oils, to eliminate the need for bakers to become involved with the mineral oil provisions of the FDA regulation.

Circle No. 4541
on Reply Form for Details

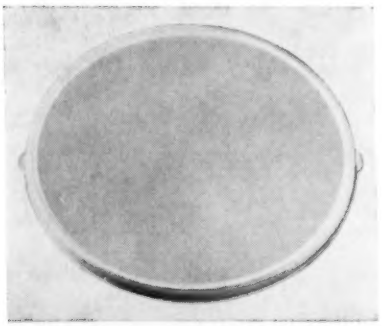
Industrial Trucks

The Exide Industrial Division of Electric Storage Battery Co. has put together a library of booklets for users of various types of industrial trucks. Histories of industrial truck costs and do-it-yourself formulas for quick, accurate calculation of all expenditures are provided. The booklets offer a combined total of 62 pages covering all areas of truck cost, operation and information from purchase prices to hourly expenses for oil. They tabulate and itemize costs of owning, operating and maintaining industrial trucks powered with electricity, gasoline or propane. The booklets are available free from Exide.

Circle No. 4542
on Reply Form for Details

Polyethylene Cover

Leon D. Bush's polyethylene can covers are said to provide a handy answer to the problem of storing opened No. 10 cans in such establishments as bakeries. These tight-fitting lids, called the No. SCC-10, are sanitary, lightweight, and easily washed for re-use. Designed to keep dirt and odors out, the Bush covers are supposed to be unbreakable. There are no dirt-catching crevices, and if desired, a simple message can be printed on the cover.



Circle No. 4543
on Reply Form for Details

Filling Machines

An illustrated bulletin has been issued by the Filler Machine Co., Inc., describing Geyer piston-type fillers for a variety of food products, including some used in the baking industry. One machine pictured and described is for batter depositing. It is recommended by the manufacturer for use in cupcakes, brown bread, date and nut bread, corn muffins, French pastry and similar products. Units of various sizes are available and can be equipped with the Geyer pan greaser. Specifications and production capacities are shown for one-operator machines from two-line models to high production, 12-line machines filling up to 290 containers a minute for some of the Geyer equipment.

Circle No. 4544
on Reply Form for Details

Handling Container

A lightweight container for materials handling in food plants is available from National Industial Products Co. It is made from a single piece of specially processed polyethylene and is said to have had extensive field testing. Called the "Flexi-Barrel," the container has flexible walls, but is made rigid by a concealed steel hoop in the rim, enabling the container to withstand severe abuse from constant filling, emptying, dumping or carting, without cracking, tearing or splitting. "Flexi-Barrel" has a 50-gal. capacity,

is 30 in. high and 22 in. in diameter, but weighs only six pounds. It is supposed to be completely waterproof and impervious to all chemicals, along with being easily washed, disinfected or sterilized by either chemical or steam cleaning. An airtight cover and demountable dolly also are available.

Circle No. 4545
on Reply Form for Details

'Fly-Wall' Device

A method of eliminating flies and other buzzing insect pests from food areas without use of poisons, chemicals, sprays, sticky tapes or electric screens has been devised by the Super Vacuum Manufacturing Co. Known as the Super Bac "fly wall," the device operates on the principle of forcing a downward, moving, controlled current of air through a four-inch slot which entirely covers the full width

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NEW Ideas, Products, Services

of the doorway. The air flow is sufficient to keep flies out, claims the manufacturer, yet is scarcely noticeable by those walking through it. "Fly wall" is easily mounted above entrances and is furnished for standard door widths, with special widths available upon order. It is powered by a one-quarter horsepower, 60 cycle, 115 volt motor and driven by a patented Super Vac, one-piece, cast aluminum air screw propeller.

Circle No. 4546
on Reply Form for Details

Foil for Bakeries

Reynolds Metals Co. cites the factors of attractiveness, protection, oven-fresh warmth and flavor by the use of its aluminum foil bread wraps. Foil insulates the loaf, evenly distrib-

uting the heat and preventing the bread from becoming dry or brittle, company officials claim. Aluminum foil wrap is now used for Van de Kamp's raisin bread, while Johnston Pie Co., Inc., uses a gravure-printed foil pan lid for its pies, emphasizing use in the field of baked foods specialties. Another new packaging concept designed specifically for baked foods by Reynolds is an aluminum foil tray overwrapped with heat shrinkable plastic film, which has been tested successfully by Reynolds' engineers.

Circle No. 4547
on Reply Form for Details

Packaging Material

"Patapar" vegetable parchment 27-110T has been introduced by Paterson Parchment Paper Co., said to be the first mold-inhibiting packaging material to be approved by the Food and Drug Administration as meeting requirements of the 1958 amendment to the Federal Food, Drug and Cosmetic Act. It is designed for such products as baked foods, among others. The parchment can be readily printed and easily glued. Its appearance is said to be excellent, with good grease resistance and high wet strength. The basis weight of Patapar 27-110T is 28 lb. for 500 sheets 24 in. by 36 in.

Circle No. 4548
on Reply Form for Details

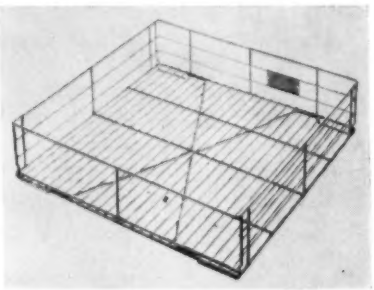
Bulletin on Algin

A technical bulletin describing the properties of algin for such diversified food applications as pie fillings, bakery jellies, toppings and meringues is being offered by the Kelco Co. The booklet is titled "Emulsifying, Thickening, Suspending and Stabilizing with Algin." It features a table which compares the effectiveness of various algin products recommended for specific properties, and a table describing versatile Kelco algin products used in the food industry. The booklet also discusses specific information of value to food chemists and technicians desirous of improving present products and developing new ones. Algin gives high viscosity to aqueous solutions at low concentrations. By careful control of manufacturing conditions, a series of Kelco algin products is available ranging from extra high viscosity through high, medium and low, to extra low viscosity.

Circle No. 4549
on Reply Form for Details

Bakery Baskets

United Steel & Wire Co. has available for bakeries a wire basket, "Sure-Stak," to permit safe transportation



in stacked position without the danger of tipping. The units are said to be excellent for truck deliveries because of the added non-tip factor. Open wire

Please send me more information. I have circled code numbers of items in which I am interested.

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CITY OR TOWN .....ZONE.....STATE.....
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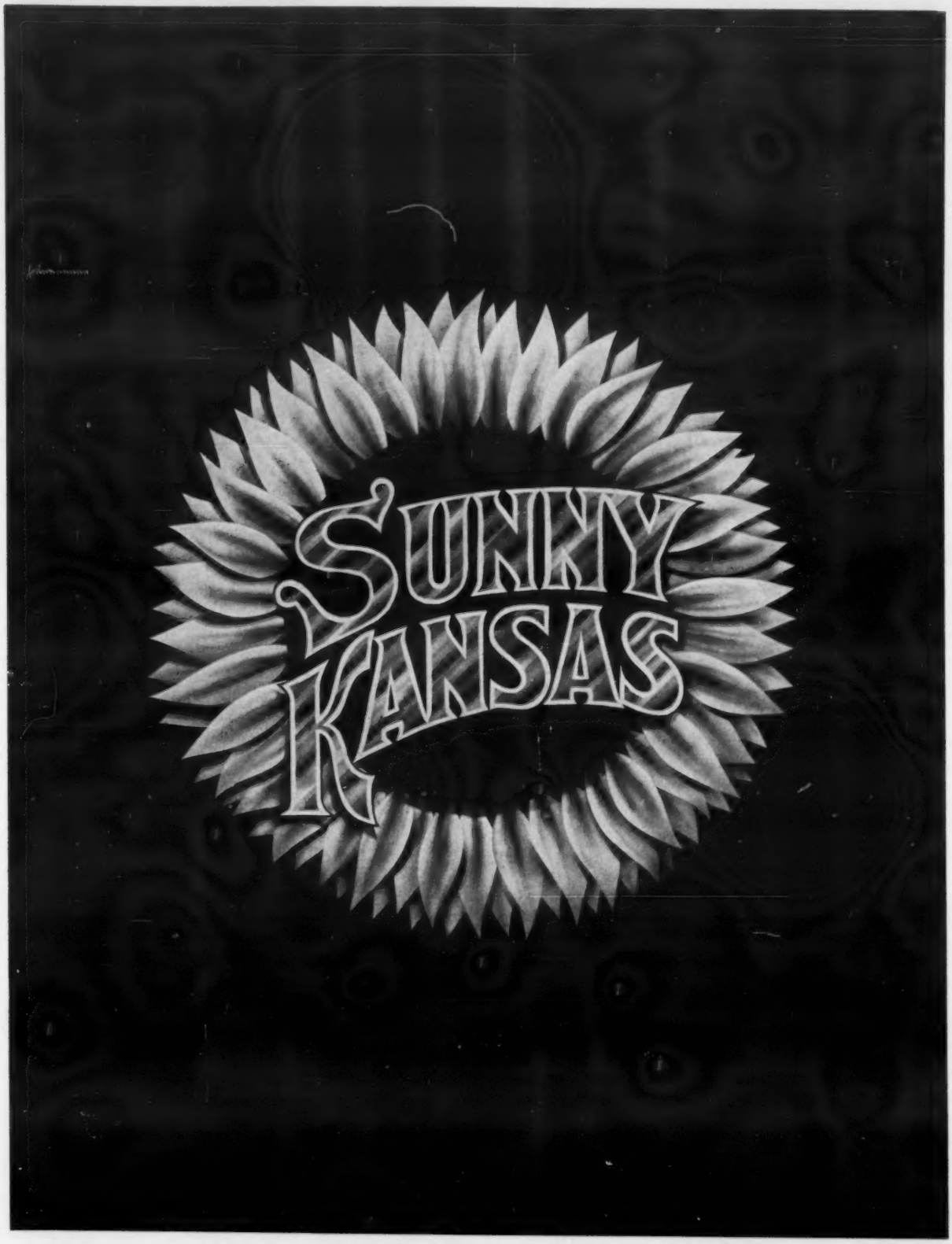


STORAGE CAPACITY
3,600,000 BUSHELS

A MASTERPIECE IN FLOUR
by Wichita Flour Mills, Inc.

DAILY CAPACITY
6,000 CWTS. FLOUR

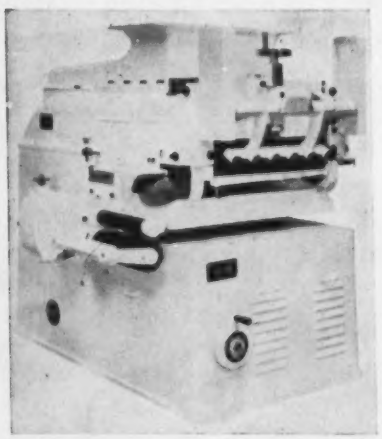
NEW Ideas, Products, Services

construction gives free air circulation so important to baked foods. To facilitate movement in conveyor systems, United offers several designs with open ends or sides to reduce handling and lifting of the products. The baskets are constructed of welded steel wire with a durable finish that is easy to clean to facilitate high sanitation standards.

Circle No. 4550
on Reply Form for Details

High-Capacity Divider

A high-capacity divider to meet higher bread dough production requirements in wholesale bakeries is announced by the food machinery division of Baker Perkins, Inc. Manufactured either as a 6 or 8-pocket unit, the new machine is reported to boost production as much as 25%. Capacity of a 6-pocket machine is 150 dough pieces a minute, or 9,000 an hour; that of an 8-pocket unit is 200 pieces a minute or 12,000 an hour. Higher horsepower is the chief reason for the increased performance. The new divider is redesigned to accommodate a new, larger power and drive arrangement, with the power unit pro-



viding 7½ h.p. It also retains previous high precision features for adjusting and spacing loaf discharging and conveying. An automatic ram pressure compensator assures uniform pressure on the dough, and there are piercing rod pistons to eliminate erratic sealing of tough or gassy doughs, plus features for accurate scaling and automatic lubrication.

Circle No. 4551
on Reply Form for Details

Insect Control

Aero-Master, Inc., is offering to bakers an insect control system based on pyrethrum-type insecticide and a special fogging machine. The major problem attacked by Aero-Master back in 1950 was to devise a dispensing method which would hold quantities of insecticide used to a minimum. The principle of thermal fogging, developed during World War II, appeared to be the answer, and work was undertaken on what is now

available as the Aero-Master fogging machine. Electrically operated and automatically controlled, the machine is said to maintain effective control of insects at about 1¢ per 1,000 cu. ft. To assist users in getting best results from the system, Aero-Master maintains a factory service program which begins with a specialist's analysis of a given user's problem and specific recommendation of fogging techniques. The firm also offers life-time free maintenance of the fogging machines.

Circle No. 4552
on Reply Form for Details

Display Materials

"Display Flex," an eight-page booklet available free from Fuller Displays, Inc., describes flexographic printing. Illustrations show versatile display materials in rolls, produced by this process, to make inexpensive window and store spectaculars, wrap-arounds, background displays and other promotional pieces of value to bakers.

Circle No. 4553
on Reply Form for Details

Packaging Brochure

Hayssen Manufacturing Co. has issued an eight-page brochure on its "Compak" line of flexible packaging machinery. The versatility of "Compak" is emphasized with pictures and explanations of modifications possible for different products. The machine may be modified from a standard one or two-tube machine to a high speed form, fill and seal machine of 10 tubes capable of making 350 packages a minute. The folder also shows all of "Compak's" latest attachments, stressing its ability to perform a complete flexible packaging sequence in one operation. The folder is offered without charge.

Circle No. 4554
on Reply Form for Details

Scale Booklet

An illustrated brochure describing heavy duty and Detecto-Gram Scales is offered free by Detecto Scales, Inc. The brochure shows a representative selection of Detecto's industrial line, including heavy duty portable, dormant, lift-truck, and overhead track scales, and Detecto-Gram scales for packing, counting and mailing operations. In addition, it illustrates and describes Detecto's automated weighing equipment, such as the automatic weight printer, nixie digital display, and the Detecto weighing and computing system. The Detecto No. Y70 booklet can be obtained without cost by writing to this publication.

Circle No. 4555
on Reply Form for Details

Drum Dumper Offered

Uhrden, Inc., is offering its "Tubar" drum dumper, said to be designed for low-cost movement, lifting and emptying of drum containers. Models are available to meet job requirements from high-speed, heavy-duty work down to the occasional use operation. All models rotate the drum 180° at any point in the lifting range. This variable height dumping feature is supposed to cut costs by using one dumper to feed receiving hoppers of various heights. The Tubar drum dumpers can be completely powered for travel, grabbing, lift and dumping. One push-button controls all the movements. A hydraulic grab with suction-cupped rubber pads securely holds the drum in every position.

Circle No. 4556
on Reply Form for Details

CANADIAN COMMENTARY

Bread Consumption Down, Value Up

Canadians appear to be eating less bread but the dollars and cents value of what they consume is up. That's the substance of a report from the statistics people.

Per capita consumption of bakery bread in 1958 dipped to 96.8 lb.—compared with 99.7 lb. in 1957 and the all-time high of 111.9 lb. in 1946. Total consumption of all bread in 1958 dropped to 1,649,951,000 lb. from the record figure of 1,653,-177,000 lb. in 1957.

But the value of bread products rose to a new record of $203,659,000, surpassing the previous record of $198,515,000 in 1957.

More Plantings Of Winter Wheat

There's an increase of 24% in winter wheat acreage this year, pushing the total of all wheat plantings up 1%. Winter varieties take up 525,000 acres, raising total wheat acreage to 23,198,200. Western Canada's share of the estimated 1960 acreage is 22,-590,000, unchanged from last year. The figure for the prairie includes 883,000 acres of durum, a drop of 13% in that type from 1959.

Oats and barley are down, but rye and flax are larger.

Farmers planted 543,100 acres to all types of rye for harvest this year, a 5% increase over 1959.

Elevator Opened At Baie Comeau

The skyline on the north shore of the St. Lawrence at Baie Comeau has a new structure—a 12 million bushel steel and concrete grain elevator owned and operated by Cargill Grain Co., Ltd. It's Canada's largest grain elevator, with a central terminal 900 ft. long and 240 ft. high.

With its construction, Cargill marks another historic step because it's the first elevator built on the north shore of the St. Lawrence below Quebec City. (About 230 miles east of Quebec City for those wishing to mark it on their road maps as a "sight to see.")

Terminal facilities include loading and shipping docks to handle ships with 27-ft. draft and unloading of boxcars. Grain can be unloaded from two lakers at once, along with simultaneous loading of ocean-going vessels.

Erected at a cost of approximately $7,500,000, there is space to increase capacity to 30,000,000 bu. «

BUFFALO • PYRAMID
Quality Flours Since 1879
The
WILLIS NORTON
Company
WICHITA • KANSAS

MOLASSES
FOR ALL YOUR BAKING NEEDS

For nearly a century, MOLASSES has been our business . . . and over the years, we have developed the finest varieties of baking molasses.

Our Technical Staff and Laboratories are constantly developing new ideas and formulas *to help bakers increase their sales of baked goods.* This service is yours on request.

If you have not already received your copy of our booklet of 95 tested formulas—"BAKING MOLASSES . . . that made MOLASSES flavor famous"—write us today; we'll be glad to send you one.

Order your molasses requirements from our nearest office . . . for prompt, direct delivery.

Stocks carried at strategic points in the U.S. and Canada.

Packed in 5-, 15-, 30-, and 55-gallon drums.

AMERICAN MOLASSES COMPANY
Packers of all grades of Molasses and Syrups
Dept. BM
120 WALL STREET, NEW YORK 5, N. Y.
Plants at: Brooklyn, N. Y. Boston, Mass. Chicago, Ill. Los Angeles, Calif. New Orleans, La. Wilmington, N. C.

WHERE THEY ARE MEETING

August

August 13—District 14, Association of Operative Millers; Denver, Colo.; sec., John Streit, Wallace & Tiernan, Inc., Denver.

September

Sept. 9-10—District 7, Association of Operative Millers; Lake Murray Lodge, Ardmore, Okla.; sec., Henry H. Stark, Ross Machine & Mill Supply Co., Oklahoma City, Okla.

Sept. 11-13—Southern Bakers Assn., annual production conference; Dinkler Plaza Hotel, Atlanta, Ga.; sec., Benson L. Skelton, Henry Grady Bldg., 26 Cain St. N.W., Atlanta 3, Ga.

Sept. 13—Bakers Courtesy Club of Pittsburgh, annual bakers clinic and tri-state convention; Webster Hall Hotel, Pittsburgh; sec., John P. Byrnes, 1133 Penn Ave., Pittsburgh.

Sept. 15-16—Virginia Bakers Council, Inc., 1960 Virginia Bakers Conference; Williamsburg Lodge, Williamsburg Va.; sec., Harold K. Wilder, 5 South 12th St., Richmond, Va.

Sept. 16-17—District 5, Association of Operative Millers; Pere Marquette State Park, Grafton, Ill.; sec., G. Edward Mehleck, Alexander Bros. Belting Co., Chicago.

Sept. 16-17—District 1, Association of Operative Millers; Rambler Hotel, Hutchinson, Kansas; sec., Richard Magerkurth, C-G-F Grain Co., Topeka, Kansas.

Sept. 17-20—New Jersey Bakers Board of Trade, Inc., annual convention and exhibition; The Berkeley Carteret Hotel, Asbury Park, N.J.; sec., Michael Herzog, 48 Claremont Ave., New Brunswick, N.J.

Sept. 18-21—Missouri Bakers Association, fall outing and meeting; starting at 5 p.m., Sept. 18, ending after breakfast Sept. 21, Arrowhead Lodge, Lake Ozark, Mo.; sec., George H. Buford, 2214 Central Ave., Kansas City 2, Kansas.

Sept. 21-23—Pennsylvania Millers & Feed Dealers Assn.; Hotel Penn Harris, Harrisburg Pa.; sec., Donald W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 22-23 — Michigan State Millers Assn., annual meeting; Hidden Valley, Gaylord, Mich.; sec., C. D. McKenzie, Jr., P.O. Box 35, Owosso, Mich.

Sept. 23-24—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Safety Industries, Inc., Kansas City, Mo.

Sept. 24-26—Southwest Bakers Assn., annual convention; Herring Hotel, Amarillo, Texas; sec., J. R. L. Kilgore, P.O. Box 127, Albuquerque, N.M.

Sept. 30-Oct. 1—District 9, Association of Operative Millers; Benjamin Franklin Hotel, Seattle, Wash.; sec., Richard Schmidt, Centennial Mills, Inc., Spokane, Wash.

October

Oct. 2—Kansas Bakers Assn., annual fall meeting; Allis Hotel, Wichita, Kansas; sec., Warren M. Burke, 3232 Roanoke Rd., Kansas City, Mo.

Oct. 7-8—District 3, Association of Operative Millers; Severin Hotel, Indianapolis, Ind.; sec., John Money, Quaker Oats Co., Akron, Ohio.

Oct. 15-19—American Bakers Assn., annual meeting and convention; Hotel Sherman, Chicago, Illinois; sec., Harold Fiedler, 20 N. Wacker Drive, Chicago, Illinois.

Oct. 16—Bakery Equipment Manufacturers Association, Fall meeting; Hotel Sherman, Chicago, Illinois; sec., Raymond J. Walter, 511 Fifth Avenue, New York 17, N.Y.

Oct. 22—District 8, Association of Operative Millers; Lenox Hotel, Buffalo, N.Y.; sec., Roy F. Kehr, Kressilk Products, Inc., Depew, N.Y.

Oct. 24—Connecticut Bakers Assn., Inc., annual convention; Hotel Stratford, Bridgeport, Conn.; sec., Charles Barr, 584 Campbell Ave., West Haven 16, Conn.

Oct. 28-29—District 11, Association of Operative Millers; Robert E. Lee Hotel, Winston Salem, N.C.; sec., J. L. Campbell, Sterwin Chemicals, Inc., 5435 Northside Road, Charlotte, N.C.

November

Nov. 4-5—District 13, Association of Operative Millers; Palliser Hotel, Calgary, Alta., Canada; sec., Gerald Dennehy, Merck & Co., Winnipeg, Man., Canada.

Nov. 5-6—Nebraska Bakers Assn., annual convention; Town House, Omaha, Neb.; sec., Louis F. O'konski, Jr., Standard Brands, Inc., 1806 Chicago St., Box 1042, Omaha, Neb.

Nov. 11-12—District 12, Association of Operative Millers; Ben Lomond Hotel, Ogden, Utah; sec., Joseph J. Keiser, Salt Lake Flour Mills, Salt Lake City, Utah.

Nov. 14-15 — New England Bakers Assn., fall convention; Sheraton-Plaza Hotel, Boston, Mass.; sec., William E. Bowman, 945 Great Plain Ave., Needham 92, Mass.

December

Dec. 10—District 2, Association of Operative Millers; Aladdin Hotel, Kansas City, Mo.; sec., George Smutny, Safety Industries, Inc., Kansas City, Mo.

1961

January

Jan. 14-17—Ohio Bakers Assn., annual convention; Carter Hotel, Cleveland, Ohio; sec., Clark L. Coffman, Seneca Hotel, Columbus, Ohio.

Jan. 29-31—Potomac States Bakers Assn., 45th annual winter convention; Lord Baltimore Hotel, Baltimore, Md.; sec., Edwin C. Muhly, 1126 Mathieson Bldg., Baltimore, Md.

February

Feb. 3-5—Bakers Association of Carolinas, annual stag outing; The Carolina, Pinehurst, N.C.; sec., Mac Inscoe, V. C. Ambler Co., Paris, Texas.

April

April 4—Allied Trades of the Baking Industry Div. 4, annual assembly. Abraham Lincoln Hotel, Reading, Pennsylvania; sec., Vernon N. Bush, 330 Bern St., Reading, Pa.

CALENDAR FOR 1960-61

AUGUST

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FLOUR IS *King...*

In the production of POLAR BEAR flour, we work as a team with the baker toward the production of topnotch loaf. You are interested in what POLAR BEAR can do for you . . . and so are we. That's the reason you will find POLAR BEAR always a quality leader.

THE NEW ERA MILLING COMPANY
ARKANSAS CITY, KANSAS

MEN GOING PLACES

There's a new face in the foreign operations division of Ekco Products Co. at Chicago. **Howard J. Fremont,** who comes to Ekco from Revere Camera Co., has been appointed as Ekco's export manager. He brings extensive experience in overseas distribution of American products, states **Malcolm N. Smith,** vice president of Ekco's foreign operations. Mr. Fremont will direct distribution of Ekco lines in all foreign markets except Canada, England and Mexico, where sales are handled by local subsidiaries.

H. J. Fremont

All sales activities of Burry Biscuit Corp. in the Philadelphia, Scranton and Wilkes Barre areas of Pennsylvania will now be directed by **Alfred C. Beardsworth,** who has been moved up to divisional sales manager of the Mid-Atlantic division.

Two promotions by Continental Baking Co. bring **Stirman E. Shelly** up to regional bread sales manager—he was bread sales supervisor—and **Robert H. Jones** to sales supervisor of the Daffodil Farms division. He was Hostess Cake Kitchen sales manager. Mr. Shelly remains at Kansas City, but Mr. Jones moves from St. Louis to the Detroit regional office.

Bemis Bro. Bag. Co. has made a couple of changes in personnel involving its western operations and the St. Louis general sales department. **A. B. Williams,** manager of sales out west at San Mateo, Cal., has been moved to the St. Louis general sales department, while **G. N. Roberts, Jr.,** comptroller for western operations, is now West Coast representative for the St. Louis general sales department. For Mr. Williams, it will mean assuming responsibility for sales management methods, procedures and performance, along with sales training functions of the entire company. Mr. Roberts will handle sales pricing for Bemis operations west of the Rockies. Mr. Williams has been with the firm since 1942, when he began as sales representative at St. Helens, Ore. He moved up to sales department supervisor in 1948, and when manufacturing facilities were transferred to Vancouver in 1949 he became sales manager. In 1955 he was named manager of the Vancouver plant, and a year later sales manager for western operations. Mr. Roberts joined Bemis in Boston in 1939, transferred to the waterproof department at St. Louis within a few months and in 1943 moved to accounting and auditing. In 1945 he became office manager of the St. Louis general office, assuming a similar position at the Los Angeles plant in 1950, and moving up to comptroller for western operations in 1956.

A. B. Williams

G. N. Roberts, Jr.

New assignments in the grocery products division of General Mills, Inc., will move **J. J. Moran** to the director of cereals merchandising post, where he will have responsibility for refrigerated foods, pet foods and household products as well as cereals. **E. H. Kees** has been named director of flour and mix products merchandising; **R. L. Reck** merchandising manager for cereals and pet foods, and **I. H. Sugarman** merchandising manager for refrigerated foods and O*Celo sponge products. **K. E. Steele** becomes merchandising manager of flour, Bisquick and potato products, while **J. J. Feeney** will become merchandising manager for mixes.

"Golden Loaf" FLOUR

Milled from choice spring wheat under modern laboratory supervision for particular bakers—aged—aerated—bulk or sack loading.

Quality Flour for 59 Years

TENNANT & HOYT COMPANY

LAKE CITY, MINNESOTA

Key sales personnel are being reassigned in the East and Southeast by the Dobeckmun Co., a division of Dow Chemical Co., and it involves some promotions. **Herbert J. Schindler** becomes regional manager of Dobeckmun's southeast sales division, moving up after five years as district manager of the Baltimore area. He now assumes responsibility for Dobeckmun's packaging and industrial sales in the areas around New Orleans, Orlando, Fla.; Atlanta, Ga.; Charlotte, N.C., and Baltimore. As his replacement in Baltimore, the firm will have **Robert J. Russ** who has represented it there since 1955. He becomes district manager. As food distribution sales representative in New York state, the company has assigned **Robert L. Wood,** a New York district salesman since he joined the firm in 1954.

Bakers in several southern states will be meeting **Jack Moskos** as a result of his appointment as sales engineer for the bakery division of Chicago Metallic Mfg. Co. In his new capacity Mr. Moskos will be contacting bakeries and bakery supply jobbers for Chicago Metallic bakers' pans, foil containers, and for Chicago Metallic's subsidiary, Pan Coatings, Inc. He will service Florida, parts of Alabama, Georgia, Louisiana and Mississippi, working under the direction of **John Reaves,** southeastern sales manager. «

"It's discouraging how quickly new equipment becomes obsolete."

Uniformity

the priceless quality in flour

yours always with . . .

Acme-Evans Flours

ANGELITE—cake flour
COOKIE KING—cookie and dough-up flour
CRACKER KING—cracker sponge flour
GRAHAM KING—100% soft wheat graham
PASTRY KING—low viscosity flour

Progressive Milling Since 1821

ACME-EVANS COMPANY, INC., INDIANAPOLIS 9, IND.

Milled with Scientific Craftsmanship

HIGHEST UTILITY QUALITY

Special Bakers Patent

Produced from Country-Run Wheat Carefully Selected for Superior Bread Baking Characteristics

The

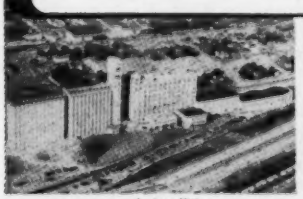
WALL-ROGALSKY MILLING COMPANY

McPHERSON · KANSAS

Centennial MILLS, INC.

1464 N. W. Front Avenue, Portland 8, Oregon
Cable address: Centennial Mills, Inc., Portland, Oregon

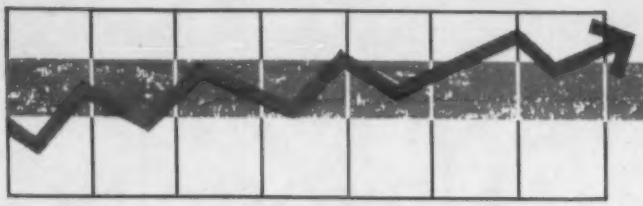
- Domestic and Export Millers.
- Experienced in all types of bulk delivery.
- New . . . complete quality control and baked products laboratory.
- Complete line of fine quality Bakers' Flours.
- Fancy Durum and Winter Wheat Granulars for macaroni industry.



Spokane Mill

Portland Crown Division

MILLS AT: PORTLAND, SPOKANE, WENATCHEE



FLOUR PRODUCTION

Readers of The Northwestern Miller for More than Half a Century.

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to The Northwestern Miller with relationship of production to capacity and to the total estimated ouput of all mills in the U.S. expressed in percentages:

	July 17-24, 1960	*Previous week	July 19-26, 1959	July 20-27, 1958	July 21-28, 1957
Northwest	715,462	616,828	690,714	672,130	693,730
Southwest	1,318,469	1,365,221	1,384,163	1,319,781	1,211,234
Buffalo	555,189	534,388	569,290	495,016	513,551
Central and Southeast	633,677	602,133	626,563	554,069	555,924
Pacific Coast	404,667	417,268	420,929	261,340	316,702
Totals	3,627,464	3,535,839	3,691,658	3,302,336	3,291,141
Percentage of total U.S. output	77.3	77.3	75	75	75
Estimated total U.S. production	4,692,709	4,574,177			
Accumulated total this month	14,289,528	9,596,819			

*Revised.

	—Percentage of capacity operated in 5-day week—					Crop year flour production ——July 1 to——	
	July 17-24, 1960	Previous week	July 19-26, 1959	July 20-27, 1958	July 21-28, 1957	July 24, 1960	July 26, 1959
Northwest	100	87	95	101	104	1,956,867	2,370,357
Southwest	100	104	107	100	92	4,169,733	5,081,706
Buffalo	106	102	115	104	108	1,695,467	1,886,361
Central and S.E.	94	90	97	97	98	1,887,705	2,122,395
Pacific Coast	87	89	90	83	90	1,268,393	1,514,721
Totals	98	96	102	99	97	10,978,165	12,975,540

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
July 17-24	240,000	199,511	83
Previous week	240,000	*168,042	70
Year ago	231,000	188,636	82
Two years ago	237,000	218,503	92
Five-year average			54
Ten-year average			80

*Revised.

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
July 17-24	472,750	515,951	109
Previous week	472,750	*448,786	95
Year ago	494,500	502,078	102
Two years ago	430,500	453,627	105
Five-year average			143
Ten-year average			130

*Revised.

●

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
July 17-24	672,260	633,677	94
Previous week	672,260	*602,133	90
Year ago	643,750	626,563	97
Two years ago	570,260	554,069	97
Five-year average			101
Ten-year average			104

*Revised.

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
July 17-24	224,250	253,676	113
Previous week	224,250	241,063	107
Year ago	221,750	247,232	111
Two years ago	287,500	243,993	85
Five-year average			154
Ten-year average			136

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Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
July 17-24	1,090,750	1,064,793	98
Previous week	1,090,750	*1,124,158	103
Year ago	1,068,800	1,136,931	106
Two years ago	1,032,000	1,075,788	104
Five-year average			145
Ten-year average			123

*Revised.

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BUFFALO

	5-day week capacity	Flour output	% capacity
July 17-24	522,000	555,189	106
Previous week	522,000	*534,388	102
Year ago	493,500	569,290	115
Two years ago	475,000	495,016	104
Five-year average			62
Ten-year average			90

PACIFIC COAST

Principal Mills on the Pacific Coast

California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
July 17-24	466,500	404,667	87
Previous week	466,500	*417,269	89
Year ago	466,500	420,928	90
Two years ago	315,000	261,340	83

*Revised.

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DURUM PRODUCTS OUTPUT

Durum products output of mills reporting to The Northwestern Miller, in sacks, based on five-day week:

	5-day wk. capacity	Wkly. production	% of capacity
July 17-24	177,500	144,368	81
Previous week	177,500	*101,282	57
Year ago	156,500	169,698	108

	Crop year production
July 1-24, 1960	376,419
July 1-26, 1959	549,467

*Revised.

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Milling Capacities At Chief Centers

Buffalo Flour Production

By calendar years (in sacks).

Source: THE Northwestern MILLER

	1956	1957	1958	1959
Jan.	2,266,400	2,624,461	2,600,500	2,397,760
Feb.	1,975,000	2,232,136	2,120,400	2,114,737
Mch.	2,266,700	2,269,811	2,358,233	2,409,406
April	1,912,100	2,301,492	2,262,453	2,149,169
May	2,159,100	2,331,789	2,192,350	2,264,897
June	1,972,000	2,274,875	2,241,028	2,385,798
July	2,150,200	2,383,502	2,402,492	2,382,550
Aug.	2,534,400	2,484,355	2,337,000	2,147,834
Sept.	2,331,900	2,592,264	2,456,067	2,325,800
Oct.	2,646,500	2,510,680	2,593,826	2,292,501
Nov.	2,422,000	2,268,658	2,227,395	2,265,225
Dec.	2,305,800	2,427,419	2,602,402	2,380,486
Tot.	26,942,100	28,601,442	28,394,146	27,516,163

●

Kansas City Flour Output

By calendar years (in sacks).

Source: THE Northwestern MILLER

	1956	1957	1958	1959
Jan.	1,234,700	1,493,581	1,357,400	1,108,324
Feb.	1,174,100	1,224,971	1,040,100	950,801
Mch.	1,311,600	1,173,083	1,159,002	1,078,748
April	1,066,800	1,087,651	1,131,708	1,044,086
May	1,193,500	1,212,403	962,849	1,122,608
June	1,059,700	1,083,311	948,964	1,122,350
July	1,180,500	1,085,420	1,132,926	1,211,993
Aug.	1,301,900	1,013,730	916,976	1,052,410
Sept.	1,162,000	1,137,185	1,222,711	996,163
Oct.	1,433,800	1,219,418	1,249,520	1,215,243
Nov.	1,294,200	1,187,504	961,969	1,131,597
Dec.	1,169,800	1,300,815	1,128,809	1,236,914
Tot.	14,582,600	14,219,072	13,212,934	13,271,237

Production for July 17-24 is at the left; production for July 24-31 appears here

WEEKLY FLOUR PRODUCTION, IN SACKS (CWT.)

Flour production in principal manufacturing areas by mills reporting currently to The Northwestern Miller with relationship of production to capacity and to the total estimated ouput of all mills in the U.S. expressed in percentages:

	July 24-31, 1960	*Previous week	July 26-Aug. 3, 1959	July 27-Aug. 4, 1958	July 28-Aug. 5, 1957
Northwest	744,229	715,462	701,283	705,736	702,386
Southwest	1,351,437	1,318,469	1,400,026	1,373,402	1,140,828
Buffalo	545,639	555,189	447,972	539,941	585,456
Central and Southeast	591,273	633,677	628,389	616,114	548,401
Pacific Coast	395,181	404,667	447,522	263,136	326,454
Totals	3,627,759	3,627,464	3,625,192	3,498,329	3,303,525
Percentage of total U.S. output	77.3	77.3	75	75	75
Estimated total U.S. production	4,693,091	4,692,709			
Accumulated total this month	18,982,619	14,289,528			

*Revised.

	—Percentage of capacity operated in 5-day week— July 24-31, 1960	Previous week	July 26-Aug 3, 1959	July 27-Aug. 4, 1958	July 28-Aug. 5, 1957	Crop year flour production ——July 1 to—— July 31, 1960	Aug. 3, 1959
Northwest	104	100	97	106	105	2,701,096	3,071,640
Southwest	103	100	108	104	86	5,521,170	6,481,732
Buffalo	105	106	91	114	123	2,241,106	2,334,333
Central and S.E.	88	94	98	108	96	2,478,978	2,750,784
Pacific Coast	85	87	96	84	92	1,663,574	1,962,243
Totals	98	98	100	104	98	14,605,924	16,600,732

NORTHWEST

Minneapolis

	5-day week capacity	Flour output	% capacity
July 24-31	240,000	202,480	84
Previous week	240,000	*199,511	83
Year ago	231,000	198,107	86
Two years ago	237,000	218,167	92
Five-year average			54
Ten-year average			79

*Revised

Principal interior mills in Minnesota, including Duluth, St. Paul, North Dakota, Montana and Iowa:

	5-day week capacity	Flour output	% capacity
July 24-31	472,750	541,749	115
Previous week	472,750	*515,951	109
Year ago	494,500	503,176	102
Two years ago	430,500	487,569	113
Five-year average			144
Ten-year average			130

*Revised

●

CENTRAL AND SOUTHEASTERN

Mills in Illinois, Ohio, Michigan, Wisconsin, Indiana, Kentucky, North Carolina, Tennessee, Virginia, Georgia and eastern Missouri:

	5-day week capacity	Flour output	% capacity
July 24-31	672,260	591,273	88
Previous week	672,260	*633,677	94
Year ago	643,750	628,389	98
Two years ago	570,260	616,114	108
Five-year average			100
Ten-year average			103

*Revised

SOUTHWEST

Kansas City

	5-day week capacity	Flour output	% capacity
July 24-31	224,250	254,354	113
Previous week	224,250	253,676	113
Year ago	221,750	247,507	111
Two years ago	287,500	226,515	79
Five-year average			155
Ten-year average			137

●

Representative Mills, Outside of Kansas City (Including Wichita and Salina)

	5-day week capacity	Flour output	% capacity
July 24-31	1,090,750	1,097,083	101
Previous week	1,090,750	*1,064,793	98
Year ago	1,068,800	1,152,519	108
Two years ago	1,032,000	1,146,887	111
Five-year average			145
Ten-year average			123

*Revised

●

BUFFALO

	5-day week capacity	Flour output	% capacity
July 24-31	522,000	545,639	105
Previous week	522,000	*555,189	106
Year ago	493,500	447,972	91
Two years ago	475,000	539,941	114
Five-year average			61
Ten-year average			90

Millfeed Production

Mills in the Northwest, Southwest and at Buffalo, representing 75% of the combined flour milling capacities of those areas, reported production of 49,675 tons of millfeed for July 24-31, compared with an output of 48,105 in the corresponding week a year ago. Production for the previous week of July 17-24 was 48,857, compared to 49,895 in the corresponding week of last year.

PACIFIC COAST

Principal Mills on the Pacific Coast

California, Oregon and Washington Mills

	5-day week capacity	Flour output	% capacity
July 24-31	466,500	395,181	85
Previous week	466,500	*404,667	87
Year ago	466,500	447,522	96
Two years ago	315,000	263,136	84

*Revised

●

DURUM PRODUCTS OUTPUT

Durum products output of mills, reporting to The Northwestern Miller, in sacks, based on five-day week:

	5-day wk. ca. pacity	Wkly. pro. duction	% of ca. pacity
July 24-31	177,500	189,708	107
Previous week	177,500	*144,368	81
Year ago	156,500	178,511	114

	Crop year production
July 1-31, 1960	710,495
July 1-Aug. 3, 1959	727,978

*Revised

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Milling Capacities At Chief Centers

Minneapolis Flour Production

By calendar years (in sacks).

Source: THE Northwestern MILLER

	1956	1957	1958	1959
Jan.	1,013,000	1,168,396	1,176,100	1,064,038
Feb.	912,400	901,607	1,059,300	964,596
Mch.	973,800	951,620	1,010,647	1,029,665
April	813,700	944,109	929,472	895,071
May	927,000	904,277	943,669	908,780
June	830,300	882,444	859,712	855,147
July	904,900	916,926	912,042	824,439
Aug.	1,023,800	1,014,887	980,200	862,372
Sept.	1,001,800	1,011,856	962,619	957,359
Oct.	1,166,700	1,096,339	1,073,187	1,021,668
Nov.	1,056,700	992,093	926,045	909,360
Dec.	952,800	1,013,109	1,036,662	926,444
Tot.	11,576,900	11,797,563	11,869,655	11,218,939

LEADING FLOUR IMPORTERS ABROAD

Many of the firms appearing in this list are available to handle the importation of other products besides flour. Some specialize additionally in cereals, some in bakers' sundries and others in feed grains and ingredients. Most of them have connections in adjacent countries and are equipped to handle both import and export business on an extensive basis. For a list of recommended firms dealing in specific commodities or in specific countries write to THE Northwestern MILLER, P.O. Box No. 67, Minneapolis 40, Minn., U.S.A.

ENGLAND

H. Cohen & Co., Ltd.
Hambro House, Vintners' Place
LONDON, E.C. 4
Cable Address: Bortrite, London

Mardorf, Peach & Co., Ltd.
52, Mark Lane LONDON, E.C. 3
Cable Address: "Dorfeach," London

Sidney Smith
(Flour, Feed & Grain), Ltd.
52 Mark Lane LONDON, E.C. 3
Cable Address: "Topri," London

SCOTLAND

Farquhar Brothers
50 Wellington Street GLASGOW,C.2
Cable Address: "Glencairn," Glasgow

McConnell & Reid, Ltd.
19 Waterloo St. GLASGOW
Cable Address: "Marvel," Glasgow

D. T. Russell & Baird, Ltd.
106 Hope Street GLASGOW,C.2

NORWAY

Loken & Co. A/S
AGENTS:
Flour, Grain and Feed
OSLO

Norenberg & Belsheim
OSLO
Cable Address: "Cosmo" and "Mobil"

GERMANY

Einfuhrhandel Mannheim
Hans Werle
MANNHEIM/GERMANY, E2., 1-3
Cable Address: "Einfuhr" Telex 0463270

DENMARK

Brodr. Justesen
COPENHAGEN
Cable Address: "Justesens," Copenhagen

HOLLAND

Bulsing & Heslenfeld N. V.
Established 1885
Damrak 20-22
AMSTERDAM (C)
Cable Address: "Heslenfeld," Amsterdam

Luchsinger, Meurs & Co.'s
Handelsmaatschappij, N.V.
AMSTERDAM—C.
Cable Address: "Matluch"

Comm. Venn. Handelmij v/h
Osieck & Co.
AMSTERDAM
Cable Address: Osieck

M. WITSENBURG JR. N. V.
Postbox 945 AMSTERDAM C.
Cable Address: "Witburg"

Van Walbeek's Handelmaatschappij N. V.
Ungerplein 2 ROTTERDAM
Cable Address: "Interest-Rotterdam"

Gebrs. Van Den Bergh's N. V.
ROTTERDAM
Cables: Locomotion Rotterdam

STOLP & CO., LTD.
47-48 Damrak AMSTERDAM
Cable Address: "Cleo"

N. V.
Algemeene Handel-en Industrie Maatschappy
"MEELUNIE"
Heerengracht 209 AMSTERDAM

N. V. Agentuur & Commissiehandel
v/h P. C. Vis & Co.
AMSTERDAM
Cable Address: "Visco"

Felix Cohen, N. V.
36, Mauritsweg (Postbox 196)
ROTTERDAM
Telex: 21290 Cable Address: Felixhen

GRIPPELING & VERKLEY N. V.
Flour Specialists Since 1889
AMSTERDAM
Cable Address: Bygrip, Amsterdam

TICKER REPORT...

THE NEW YORK STOCK EXCHANGE

Quotations on baking, milling and allied stocks listed on the New York Stock Exchange:

	1960 High	1960 Low	July 25, 1960 Close	Aug. 1, 1960 Close
American Bakeries Co.	44⅞	40	....	41¼
Archer-Daniels-Midland Co.	40¼	32½	33¼	33¾
Borden	50⅛	40¼	49⅞	49⅛
Continental Baking Co.	48½	37½	38¾	38½
Cream of Wheat	39½	31½	36	35¼
General Baking Co.	12⅜	9¾	10⅛	9⅞
Pfd. $8	146	141	145	144½
General Foods Corp.	135	98⅛	128½	124¼
General Mills, Inc.	31	23⅞	26⅛	27¼
Pfd. 5%	108	101½	106⅞	106½
Merck & Co.	96½	73	83	86⅛
Monsanto Chemical Co.	55⅜	37⅞	37⅜	39⅞
National Biscuit Co.	66½	49¾	59	62¾
Pfizer, Chas.	38¼	26⅜	30½	32⅜
Pillsbury Co.	39½	31⅜	37½	37½
Quaker Oats Co.	50½	42	48	48¾
St. Regis Paper Co.	55½	35⅛	36¼	36½
Standards Brands, Inc.	49⅜	35⅛	45⅜	45¼
Sunshine Biscuits, Inc.	99¾	85	90	90½
United Biscuit of America	39⅜	24	34¾	34¾
Ward Baking Co.	15¾	11	11¼	11⅛
Pfd. $5.50	89½	84¾	86	86
West Virginia Pulp & Paper Co.	56¾	37	37¼	39
Pfd.	96½	92½	....	95½

Stocks not traded:

	Bid	Asked
Continental Baking Co., $5.50 Pfd.	103¾	104½
Merck & Co., $3.50 Pfd.	77	80
National Biscuit Co., $7 Pfd.	156	157
Pfizer, Chas., Pfd.	97	99½
Pillsbury Co., $4 Pfd.	95	98
St. Regis Paper Co., $4.40 Pfd.	91½	93
Standards Brands, Inc., $4.50 Pfd.	75½	76
United Biscuit of America, $4.50 Pfd.	94	98

THE AMERICAN STOCK EXCHANGE

Quotations on baking, milling and allied stocks listed on the American Stock Exchange:

	1960 High	1960 Low	July 25, 1960 Close	Aug. 1, 1960 Close
Burry Biscuit Corp.	11⅜	7¼	10½	10⅜
Horn & Hardart Corp. of N.Y.	....	....	34½	....
Wagner Baking Co.	4	3	3⅝	3¾

Stocks not traded:

	Bid	Asked
Horn & Hardart Corp. of N.Y.	34¾	35¼
Wagner Baking Co., Pfd.	70	72

There is a lot to be said for
GOOD JUDGMENT

Good judgment has guided Ogilvie Flour Mills for more than a century and a half of leadership in the milling of fine flour. It's good judgment that causes Ogilvie to select only the choicest wheat . . . that combines their skill and knowledge with some of the most modern milling equipment in the world, to produce the unvarying high quality that their customers expect of the name "Ogilvie".

Ogilvie Flour Mills intend to continue using good judgment . . . the same good judgment that tells you it's wise to buy quality!

Manufacturers of Ogilvie Flour—Ogilvie Ready Mixes —Ogilvie Vita-B Wheat Germ Cereal—Ogilvie Oats —Ogilvie "Miracle" Feeds for livestock and poultry.

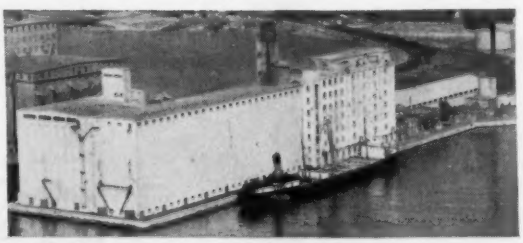
THE OGILVIE FLOUR MILLS CO., LIMITED

Mills at: Montreal—Port William—Winnipeg—Medicine Hat—Edmonton
Cable Address: OGILVIE MONTREAL—all codes used

Maple Leaf Milling Co. Limited.

TORONTO, CANADA

CABLE ADDRESS
"MAPLEFLOUR"



"A Seat on the Aisle"

All Seaway traffic passes Canada's largest flour mill, the Maple Leaf mill at Port Colborne, situated at the Western entrance to the Welland Canal.

MILLS & FEED PLANTS LOCATED—

Montreal • Toronto • Goderich • Port Colborne
Winnipeg • Medicine Hat • Calgary • New Westminster

Packaging – See How It Has Changed

One wise man once corrected another with the remark that death and taxes are not the only certainties in this world. "What about change?" he reminded his fellow seer.

Change certainly has loomed large in the business of packaging flour products. It has been advocated, tried —sometimes resisted—but has always managed to make its presence felt just as surely as have the hammer blows of time.

The best way to determine what has been done to meet the changing demands of the times and the customers' shifting needs and tastes is to look at a few of these packaging innovations.

There have been several intermediate steps taken over the years to develop the gay blue, orange and gold family flour sack used by Russell-Miller Milling Co. (now Russell Miller-King Midas Mills). These involved the customary clean up of confusing, sometimes unnecessary, symbols, obscure directions and obsolete illustrations.

The current container is simple and peppy and puts heightened emphasis on the brand acceptance of Occident, the ease of its usage (the punch line "For Miracle Baking" appears in three places). As with other leading brands, the package back is used handily for consumer promotions.

'Robin' of Sherwood Brought into Line

There is no more striking example of a brand name translated into a visual image for the purchaser than Robin Hood of Sherwood and his period of service to Robin Hood Flour Mills, Ltd.

About 1929 Montreal streetcars carried advertising cards showing a tube of Robin Hood porridge oats. The tube (upright to show the labeling and Robin Hood name in one illustration, and tipped to show the product in the other) was about all there was to see.

A few years later Robin Hood himself, in full archer costume, appeared on the actual sacks of oats, and in color. Brand association was established.

With the evolution to smaller paper sacks, and the accompanying development of multi-color printing, Robin Hood has been given his most modern dress.

His flowing locks have been shorn, the plume of his hat telescoped to a perky feather, and the whole image

The packaging revolution is upon us. Millers and bakers are caught up in the wealth of products competing for shelf space, and many are rising to meet the challenge. This is the second of two articles on the subject of packaging. (The first appeared in The MILLER of July 11, page 24.)

Robin Hood

FLOUR MILLS LIMITED

"You're sure it's good if it's Robin Hood"

Canadian Spring Wheat Flour

Cake and Pastry Flour

Biscuit Flour

Durum Products

Rolled Oats

Oatmeal

Mills and Sales Offices: Vancouver, Calgary, Moose Jaw, Saskatoon, Winnipeg, Toronto, Humberstone, Montreal, Moncton.
Eastern Export Office: Montreal.
Oriental Export Office: Vancouver.

CANADA

restricted to a head and shoulders emblem.

This has permitted use of the remainder of the package for product identification and gay green, red and yellow sales and merchandising messages. The rest of the package lends itself to handy recipes, merchandising ideas and coupon information.

'Le Meilleur du Canada'

The development of packaging by Ogilvie Flour Mills Co., Ltd., Montreal, presents some interesting points on progress. The original color scheme of yellow, red and blue has been retained. But again, the advancement of color technology has allowed considerable improvement since the early 1920's.

Colors are more intense, demarcation between color units more sharply defined, and placement more harmonious. Ogilvie oats has moved from the conventional tube to the handy, rectangular cardboard package.

Ogilvie introduced its line of cake mixes in 1948, and since then has held to the current presentation of the finished product—a giant, full color, true "slice of the cake" for central emphasis. One innovation was made early in 1959, when the twin-pack "real cake mix" package of Ogilvie was introduced.

One of International Milling Co.'s classic labels, now almost a historical treasure, is its original, circular print for its Bohemia flour. Strictly in black and white, the circular label had a dusky maiden with flowing, shoulder-length tresses centered within the brand name, company name (New Prague Flouring Mill Co., and later International Milling Co.) and a brief notation of the address.

Bakers and millers alike are being

McCabe Grain Company Limited
WINNIPEG-VANCOUVER
LONDON, ENGLAND
Schwartz & Co.,(Grain) Ltd.
Victoria Products and Grain
(overseas agents) Ltd.

Canadian Wheat, Oats and Barley
Over 600 Elevators in Manitoba
Saskatchewan and Alberta.
UNITED GRAIN GROWERS, LTD.
Winnipeg, Manitoba

EASTERN CANADA FLOUR MILLS
LIMITED
Best Canadian Hard Spring Wheat Flours
"Cartier" "Lasalle" "Eastern Queen"
"Pontiac"
Cables—Eastmills MONTREAL, CANADA

WM. CHARLICK, LTD.
FLOUR MILLERS
Specializing In Exports
ADELAIDE, SOUTH AUSTRALIA
Cables: "Cityflour" Adelaide

GREAT STAR FLOUR MILLS, Ltd.
Canadian Spring and Winter Wheat Flour
"SILVERKING" "GREAT STAR" "CORONET" "SILVER STAR"
CABLE ADDRESS: GREAT STAR ST. MARY'S, ONTARIO, CAN.

QUALITY UNIFORMLY MAINTAINED SINCE 1887
Lake of the Woods Milling Co. Limited
Cable Address
"HASTINGS"
Montreal
ALL
CABLE CODES
USED
Makers of CANADIAN HARD SPRING WHEAT Flour
Mills at
Montreal, Keewatin, Winnipeg, Medicine Hat
HEAD OFFICE: MONTREAL WESTERN OFFICE: WINNIPEG

bombarded with a simple set of facts every day:

It is believed that the average shopper in a supermarket—no matter how long she stands and talks with the neighbors — actually shops — literally contemplates specific purchases—for a total of no more than 25 min. If the market offers 6,000 different products, Mrs. Shopper will have to "soak in" with her eyes 240 of these every minute to be exposed to all of them. Now consider: Of some 30 to 35 million or more women who wear glasses, half of these do not wear them in public—and 20 million or more who shop need glasses.

As a result, any baker, miller, or similar processor and distributor of merchandising is taking a considerable chance if he continues to hope that the shopper will be attracted to his product by any printed material less than equal to a great visual "shout".

The people who consider themselves authorities in the field—the packaging consultants—have had much to say about improving design and container quality. Where they have been able to convince the manufacturers, packaging improvements have been made, sometimes with resultant sales increases, sometimes without these gains.

Among these authorities, the gospel preached is that the package is the salesman, particularly in the self-service store which has come into a dominant position in recent years.

Another point which they stress is

NAtional 2-3344—2-3345
E. J. BURKE & COMPANY
FLOUR AND CORN MEAL
E. J. BURKE
Monumental Building
6120 W. North Ave.
CHICAGO 39, ILL.

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FLOUR
Representing Highest Class Mills and Buyers
26 Broadway Room 948
NEW YORK 4, N. Y.

FLOUR
Broker and Merchandiser
DAVID COLEMAN, Incorporated
Members N. Y. Produce Exchange
Rm. 520—120 Bdwy., NEW YORK 5, N. Y.
New England Office: 211 Bryant St., Malden, Mass.

HEADQUARTERS FOR
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ONE BAG OR A CARLOAD
GILBERT JACKSON CO., INC.
Board of Trade Bldg. • Kansas City, Mo.

JOHN E. KOERNER & CO.
DOMESTIC EXPORT
FLOUR-FEED
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740 Magnolia St.
NEW ORLEANS 7, LA., U. S. A.

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FOREIGN FLOUR DOMESTIC
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33rd and Arch Streets
PHILADELPHIA 4, PA.

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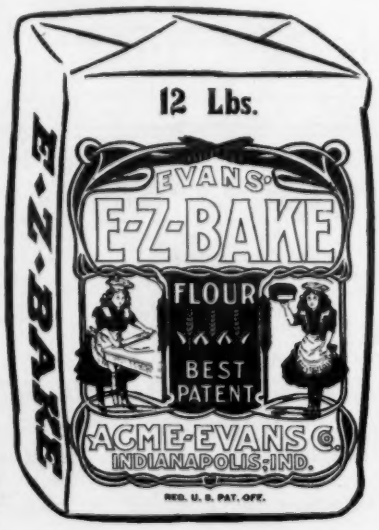
COMPANY
Flour Brokers
OMAHA, NEB.
New York San Francisco



the fact that the package as it is designed must be linked closely with the product advertising so that recognition at the point where the package is displayed will be quick and complimentary.

The flour package of the New Era Milling Co., Arkansas City, Kansas, illustrates the trend over the years from 50 lb. bags to later preference for 25 lb. sizes. The accompanying illustrations depict also the manner in which New Era's package lettering has been reduced over the years as the package has been forced to compete with more products on the shelves.

The flour package of Acme-Evans Co., Inc., Indianapolis, has evolved through steps from 1909 to the present day. Actually, there were several intermediate revisions, but the photos on page 68 show best the contrast by spanning the years at a single visual observation. In between "the old" and "the new," tiny, hard-to-read lettering was discarded, the face of the package was simplified, and the remaining type necessary to put across the essentials of the message was enlarged. «

OVER THE YEARS there have been several intermediate steps taken in the evolution of the Occident flour package of Russell-Miller Milling Co. (now Russell Miller-King Midas Mills) to its present form. Even the present package, introduced in 1955, has been modified somewhat. The oldest "package" is at the top left, followed by a somewhat later one at the top right. At the lower left the package becomes brighter. The gay carton now in use is at the lower right.

Baking Firm Formed

Dutch Maid Bakery, Inc., Wheatridge, Colo., has filed articles of incorporation, listing $40,000 capitalization to deal in all kinds of bread, cake, cookies, confections and similar articles at wholesale and retail. Incorporators and directors include Seth T. Gonzales, Susie G. Gonzales and Phillip Vieria. «

CLASSIFIED DEPARTMENT

Advertisements in this department are 15¢ per word; minimum charge, $2.25. (Count six words for signature.) Add 20¢ per insertion for forwarding of replies if keyed to office of publication. Situations Wanted advertisements will be accepted for 10¢ per word, $1.50 minimum. Add 20¢ per insertion for keyed replies. Display Want Ads $7 per inch per insertion. All Want Ads cash with order.

◆ ◆ ◆

BUSINESS OPPORTUNITIES

FRANCHISES MAKE PROFITS! OPERATE YOUR own franchise business. Nationwide openings. NFR's monthly report publishes best offers. Write today for free details. National Franchise Reports, CD-528, 333 N. Michigan, Chicago 1, Ill.

HELP WANTED

Elevator Superintendent Assistant

The Pillsbury Company has an opening in its major elevator operation in Buffalo, New York. Assist superintendent in developing and applying operational plans, safety and quality programs. Heavy supervisory responsibility along with maintenance supervision.

Applicants should have a high school education plus three to five years experience in supervision in grain handling. Contact in confidence:

Colbert Butler
THE PILLSBURY COMPANY
Minneapolis 2, Minnesota

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GRIST of GRINS

Professor—"Why don't you answer when I call your name?"

Student—"I nodded my head."

Professor—"You don't expect me to hear the rattle all the way up here, do you?"

●

Housewife to friend: "I'm glad George isn't perfect. I love to nag."

●

At age 20 we don't care what the world thinks of us; at 30 we begin to worry about what it thinks of us; at 50 we find it wasn't thinking of us at all.

"I dream every night about baseball," the patient told his psychiatrist.

"Don't you dream about anything else, girls for instance?"

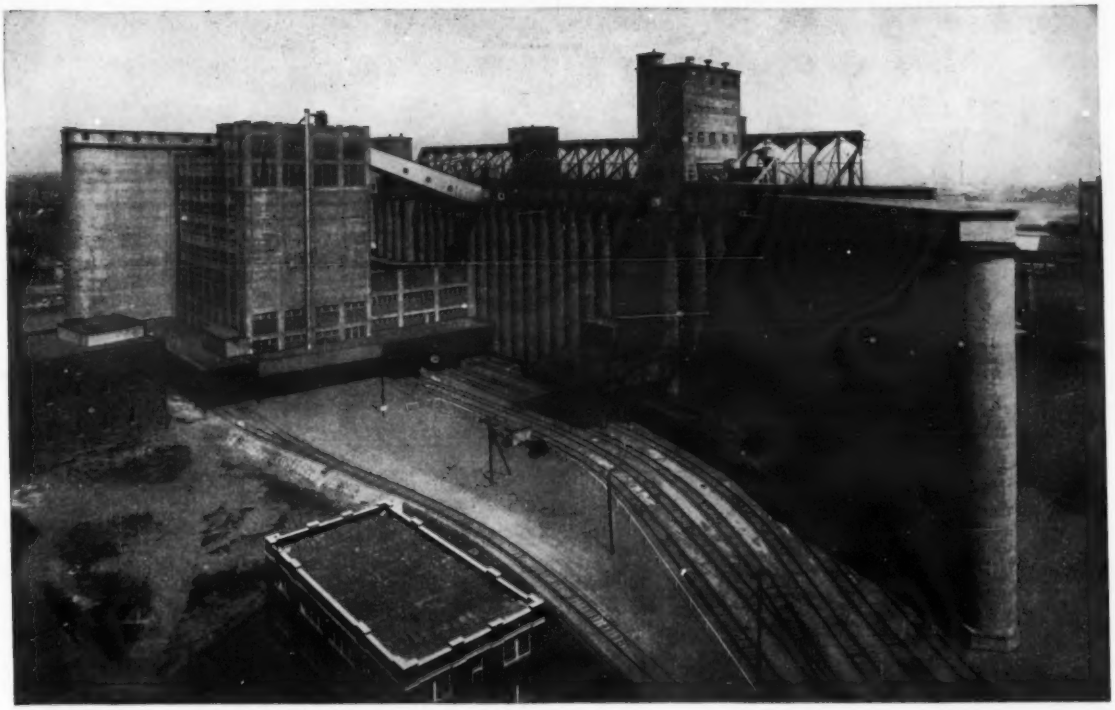
"What! And miss my turn at bat?"

●

"So you have climbed the Matterhorn!" said the Frenchman to the Englishman. "That is a foot to be proud of."

"Thank you," replied the Englishman, "but perhaps you mean 'feat'."

"Aha," exclaimed the Frenchman, "then you have climbed it more than once!"



International Milling Company, Buffalo, New York Capacity: 15,200 cwt. Mill elevator storage: 4,660,000 bu.

INTERNATIONAL MILLING COMPANY GETS MILL-TO-MILL UNIFORMITY WITH

W & T Flour Treatment

Quality and uniformity are bywords in International Milling Company's 22 flour mills in the United States and Canada. International has learned it can depend upon Wallace & Tiernan's flour treatment processes and service to assist in maintaining optimum uniformity and quality in its flour produced from mill to mill.

No matter what kind of flour is being produced, there is a Wallace & Tiernan process to protect uniformity.

- The Dyox® Process assures consistent bakery performance. Fresh, sharp chlorine dioxide gas is accurately applied to flours to give uniform maturing.
- Chlorine gas is metered precisely through W&T control units for the same pH, time after time.
- Novadelox® insures uniform color and best color dress.

International Milling Company is only one of the many milling companies using W&T flour treatment. If your mill is not one of these, investigate the advantages of Wallace & Tiernan's complete flour service.

W&T Heavy Duty Feeders for the accurate application of Novadelox and "N-RICHMENT-A."

Dyox generating units. Chlorine dioxide gas is generated and applied as needed—without waste.

NOVADEL FLOUR SERVICE DIVISION
WALLACE & TIERNAN INCORPORATED
25 MAIN STREET, BELLEVILLE 9, NEW JERSEY
REPRESENTATIVES IN PRINCIPAL CITIES

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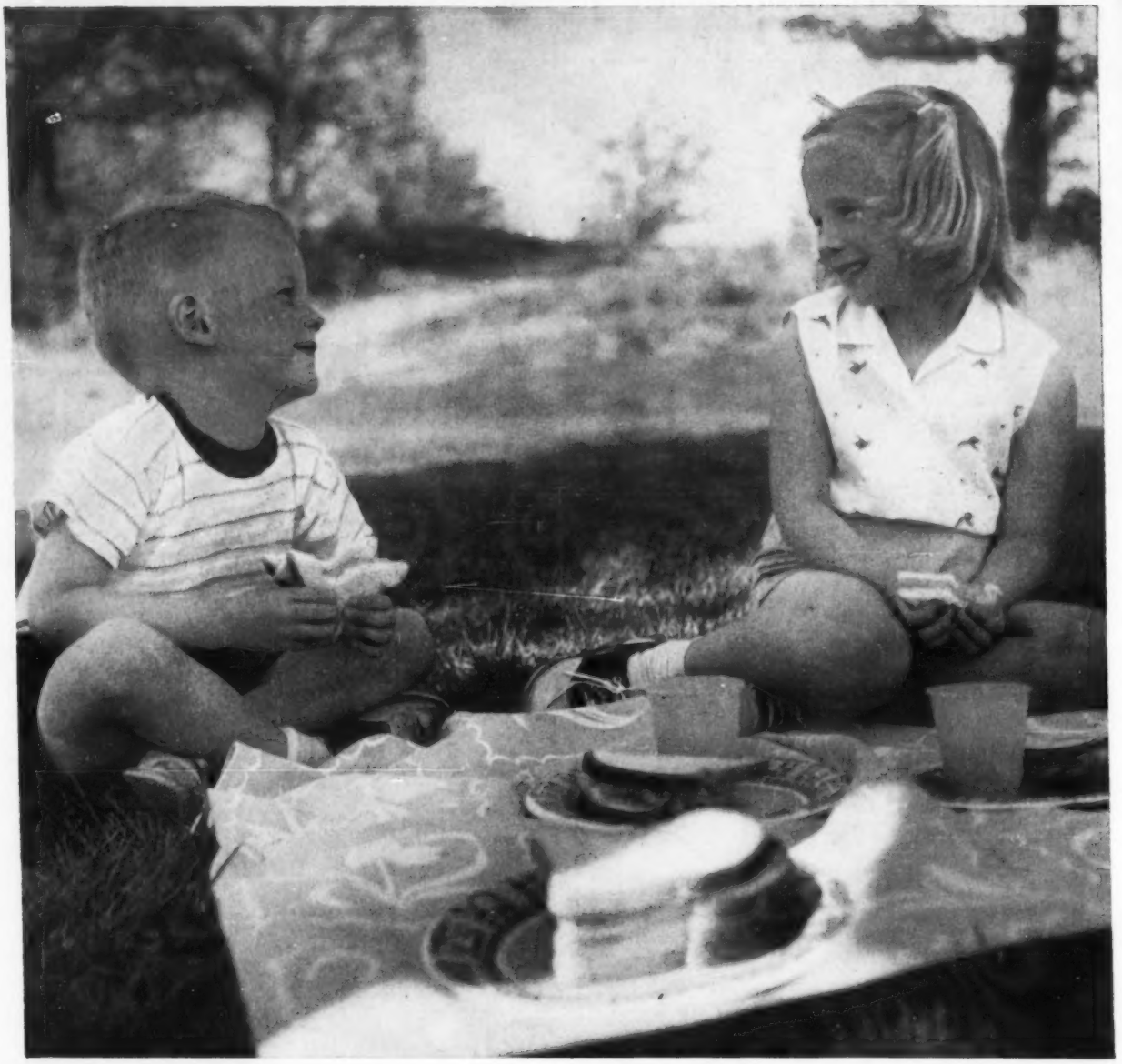

It's still the sandwich that makes the picnic in any back yard

First thing you need for a picnic is bread. Any shape, any size, any style . . . but bread.

Putting bread around cheese or meat is a delicious old custom, and one we are not likely to lose. Since the Earl of Sandwich had the idea, and we truly doubt that he was the first, the world has made the sandwich a symbol of pleasant eating . . . picnic eating . . . party eating.

This is just one more way that the baker builds himself into the fabric of everyday living. The baker: as essential to good living as the bread is to the sandwich.

General Mills is proud to be supplier to an industry which offers so much to the world around it.

Good eating will always begin with Bread

General Mills